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The Role of the School Inspection System in Demonstrating and Improving the Quality of Compulsory Education: Exploring Stakeholder Perceptions in Shandong Province China

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Abstract

School inspection plays a critical role in evaluating, supervising and improving education quality in many countries (Eurydice, 2004; MacBeath, 2006). As the guidance for evaluation, school inspection frameworks stipulate criteria and how school inspections are carried out, which affects the quality of school inspection and its impact on education quality (Scheerens et al., 2003). Given the limited empirical research on school inspection and its impact on school quality in China, this study aims to explore the strengths, weaknesses and overall quality of school inspection policies and practice in China and examine in one city region stakeholder perceptions of inspection purposes, content, processes, outcomes, and context, as well as the potential to improve inspection practice and compulsory education quality in China. Considering educational inequity between schools and teachers professional rank may influence teachers' views about school inspection, this study also seeks to identify the differences in perspectives of participants with senior/junior professional titles from urban/rural schools. A conceptual framework was developed to guide the research aim and design by synthesising relevant theories and school inspection frameworks that inform the concept of education quality and the practice of school inspection.

A mixed-method empirical research design was employed to conduct research in ten purposively selected junior high schools in Q city of Shandong Province in China. Data collection methods include a survey of 364 teachers and headteachers and 13 stakeholder interviews with headteachers, teachers, city and national inspectors, and an educational officer. Through statistical analysis of survey data and thematic analysis of interview data, this study found that stakeholders considered (1) some inspection indicators are particularly important to demonstrate education quality including student physical and emotional well-being, equity in classroom teaching, and teachers' motivation; (2) some inspection indicators are unrealistic and unpractical, and this was linked to school context and schools' fraudulent behaviours to reach inspection criteria; (3) compliance with legal regulations and school improvement were more important than accountability as key purposes of school inspection; (4) equity in student outcomes has not received enough attention from Chinese school inspectorates; (5) currently, it is a challenge to realise student all-round development in the dominant exam-oriented evaluation system. It was also found that inspection indicators regarding innovative classroom teaching and teachers' professional development, and inspection procedures regarding feedback provided by external inspectors were rated significantly higher by junior teachers than senior teachers. These findings suggest specific ways in which the current inspection system in Shandong Province could be improved, for example by including new indicators to complement the existing inspection framework. This study overall argues that school inspection criteria and methods in Shandong province and more broadly in China could be better improved by taking account of stakeholder views and school contexts and by putting more stress on providing school-based professional guidance instead of intense bureaucratic monitoring.

Dedication

I dedicate this thesis to my parents for their constant support and unconditional love. I would like to thank my parents who raised me with a love of knowledge and encouraged me in all my pursuits. Without their precious support it would not be possible for me to have finished this research.

Acknowledgement

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Author's Declaration

I declare that the work in this dissertation was carried out in accordance with the requirements of the University's Regulations and Code of Practice for Research Degree Programmes and that it has not been submitted for any other academic award. Except where indicated by specific reference in the text, the work is the candidate's own work. Work done in collaboration with, or with the assistance of, others, is indicated as such. Any views expressed in the dissertation are those of the author.

SIGNED:…  **……** **DATE:.....05/08/2019.....**

Table of Contents

List of Abbreviations

CCCPC	Central Committee of the Communist Party of China
CELPRC	Compulsory Education Law of the People's Republic of China
EIO	The Educational Inspection Office
ESF	European Science Foundation
EU	European Union
FYPNED	Five-Year Plan of National Education Development
JHS	Junior High School
MOE	Ministry of Education
NCE	National Committee of Education
NCR	New Curriculum Reform
NIE	the National Inspectorate of Education
OECD	The Organisation for Economic Co-operation and Development
OFSTED	Office for Standards in Education
SEC	the State Education Commission
SC	State Council
SER	School Effectiveness Research
TER	Teacher Effectiveness Research
UoB	University of Bristol

List of Tables

List of Figures

Chapter 1 Introduction

1.1 Introduction to the Chapter

The study aims to explore the strengths, weaknesses and overall quality of school inspection policies and practice in China and examine stakeholder perceptions of inspection purposes, content, processes, outcomes and context, as well as the potential to improve inspection practice and compulsory education quality in China. This introductory chapter will begin with a brief introduction to the research background on school inspection where the characteristics of some relevant research issues will be identified. This chapter will then move to describe the research aims, followed by six specific research objectives. Then, the academic, local and personal rationale will be presented to underpin this research, followed by six specific research questions that address the research aims. Finally, this chapter will conclude by providing a brief overview of the theoretical framework, the rationale for the selected research methods, and the structure of the whole thesis of eight chapters.

1.2 Research Background

Education quality improvement is a main goal for countries around the world, owing to clear associations between higher student access and achievement, and poverty reduction and better economic development (Thomas & Peng, 2013). In the schooling process, educational evaluation plays a positive role in helping educators make better decisions around improving education quality (Popham, 1988). In order to counterbalance the impact of high reliance on school autonomy and self-governance on decreased education quality (Ehren et al., 2013), school inspection has become prevalent in evaluating and strengthening government control over school quality in many countries (Eurydice, 2004; MacBeath, 2006). Hence, school inspection frameworks, as the guidance for evaluation, are formulated to stipulate criteria and process in how school inspections are carried out when inspectors are making judgements on schools (Ofsted, 2015). School inspection targets realise objectives by relying on 'hard governance', such as league tables, sanctions, and interventions (Clark & Ozga, 2011), which may prevent the self-delusion caused by self-evaluation (SICI, 2005). There also have been a significant number of studies pertinent to the role of school inspection in educational improvement (Chapman, 2001b; Osler & Morrison, 2000; Wilcox, 1989). Recently, both positive and negative effects of school inspection (e.g. 'window dressing' and 'teaching to inspection') have been discussed in depth (Bitan et al., 2014; De Wolf & Janssens, 2007; Nelson & Ehren, 2014; Penninckx, Vanhoof, Maeyer, et al., 2015), though mainly in the context of western countries. Bitan et al. (2014) saw the credibility of school inspection

standards as a factor which affects the quality of school inspection, given that inspectors judge school quality based on the pre-established standards. Specifically, standards in this study refer to criteria which are directly related to the selected definitions and concepts of education quality employed to supply an ultimate evaluative interpretation of school quality (Scheerens et al., 2003). Nonetheless, the impact of standards on improving school quality are heavily dependent upon the quality of school inspection implementation (Porter, 1994).

However, in the context of China, empirical evidence identifying the impact of school inspection on education quality has been scarce. Most research on the Chinese context has also failed to place an emphasis on addressing the practical issues existing in the applicability of the inspection standards and procedures. Li et al. (2016) claimed that only 11.5% of existing local research on school inspection provided quantitative evidence and less than 3% supplied qualitative evidence across all of the studies. Most of the non-empirical studies paid more attention to the development of the educational inspection system in China and issues related to the construction of the inspection system at the macro level (Cravens et al., 2012; Han, 2006; Zhao, 2004), rather than to specific school inspection implementation processes. Very few empirical studies have sought to uncover factors which could influence education quality through the improvement of the current school inspection system in China (Lee et al., 2008; Sun & Zheng, 2015). Many Chinese scholars have also preferred to draw on western countries' experience of running education inspection systems by elaborating and comparing the natures of their school inspection systems with that of China and then supplying advice for improving Chinese educational inspectorates (Ding, 2003; Rasmussen & Zou, 2014; Sun et al., 2009). However, few researchers have considered sufficiently whether these "raw" experiences learned from other countries could fit in the Chinese context.

In contrast to previous research, this research first intends to provide new empirical evidence from key stakeholders upon which school inspection indicators and procedures are important and practical in terms of improving education quality in the context of one province in East China (Shandong province). In this study, current inspection practices in China as well as the adaptability of theories of education quality that have been used in western countries are examined. Second, both quantitative and qualitative data are used to identify the strengths and weaknesses emerging from the practice of school inspection implementation in Shandong province. This evidence helps to fill the gap in empirical research on the positive and unintended impacts of school inspection in the context of China and similar developing countries. Lastly, this research attempts to identify the factors and issues within the policy context of education and the school inspection system which might affect education quality in

China. This study also presents suggestions to inform and enhance local school inspection policy and practice, and to enrich the corresponding international knowledge based on empirical evidence.

1.3 Research Aim and Objectives

The study aims to explore the strengths, weaknesses and overall quality of school inspection policies and practice in China and examine stakeholder perceptions of inspection purposes, content, processes, outcomes and context, as well as the potential to improve inspection practice and compulsory education quality in China.

Through this aim the study seeks to explore the strengths and weaknesses in the process of school inspection and uncover the contextual issues that might affect school inspection quality and education quality. It is anticipated that the original evidence presented will also point to new recommendations with regards to improving the school inspection system and educational quality in China.

The objectives of the study are to:

1) Review the key concepts of education quality and previous theories of school effectiveness and school inspection and generate a theoretical framework from the international literature, which highlights the main factors that affect education quality.
2) Present an overview of the history of educational administration reforms, innovations for quality education and the development of the educational inspectorates in China that demonstrates the main priorities embedded in the practice of schooling and school inspection implementation.
3) Present a critical account of the existing school inspection frameworks in China and Shandong province as the rationale for the research inquiries.
4) Conduct empirical research drawing on questionnaires administered to headteachers, teachers, and administrative staffs in ten junior high schools across urban and rural areas in Shandong province to examine participants' perspectives on school inspection purposes, and the importance of school inspection indicators and procedures used in school inspection to demonstrate and improve education quality.
5) Conduct empirical research in three junior high schools by performing semi-structured interviews with headteachers, teachers, inspectors, and education officer, and then performing thematic analysis to explain and complement the quantitative findings.
6) Triangulate quantitative and qualitative findings of this research and compare them with international and local research to explore the implications of the research findings, to

enrich the knowledge of education quality, and to inform school inspection policy and educational reform in the Chinese context.

1.4 Research Rationale

1.4.1 Academic Rationale

From Lillis (1992) sample of national contexts, education inspection is perceived as the most notable mechanism to control and improve education quality in many developed countries, including the UK, the United States, the Netherlands, and Germany. School inspection is composed of criteria and implementation, either of which influences the quality of school inspection (Scheerens et al., 2003). Many of the previously validated school effectiveness factors which underpin school inspection criteria in western countries (Ehren et al., 2013; Van Bruggen, 2010) have not been adequately examined in developing countries (Teodorovic, 2009). As a result, the researcher found that very few studies about school inspection standards in western countries employed theories of education quality and school effectiveness which would actually reflect the priorities of education quality in the Chinese context. It might be because cultural differences contribute much to the diversities of educational processes and outcomes between different countries (Cheng, 2000). More importantly, obvious differences exist between China and western countries in terms of school environments and macro-level conditions (e.g. economy, politics, and geography) (Thomas et al., 2016). China has the biggest educational system in the world with the highest educational inequity remaining between rural and urban areas. For instance, the most reputable senior and junior high schools are found in urban areas; in contrast, rural schools often confront a funding shortage to support curriculum development and teachers' professional development (Zhou, 2017). Thus, international theories, such as inspection criteria from western countries applied in different regional contexts, might yield different understandings and results when applied in China. Most researchers has studied the impact of school inspection in the European context, indicating that school inspection brings up both positive and passive effects on teachers' behaviour, school improvement, and student achievements (Nelson & Ehren, 2014). Also, very limited empirical research has explored the impact of school inspection in the Chinese context (Lee et al., 2008; Li et al., 2016; Ning, 2015), perhaps since the Chinese school inspection system is still developing and the effects of school inspection on improving education quality have not yet been completely determined.

De Grauwe (2008) thus suggested that inspection purposes and priorities should accommodate the local context or different regions within a country to promote school

improvement. In this case, it is necessary to involve headteachers, teachers, and higher-education providers in the design of inspection frameworks to evaluate schools, since they could affect the process of school development (Ehren et al., 2017). Hence, participants' perceptions of school inspection are expected to reveal the feasibility and applicability of the inspection indicators, approaches as well as factors embedded in the different schools and reginal contexts in the process of school inspection which might affect the quality of school inspection. Therefore, on one hand, this research is attempting to address a gap in the literature, in that education quality, school effectiveness, and school inspection theories have not been adequately tested in developing countries. On the other hand, this research might generate new findings in a new context, China, so as to enrich the knowledge base around school effectiveness and education quality, as well as the impact of school inspection.

1.4.2 Rationale in the Chinese Context

China, as a country that has long been oriented towards high-stakes examinations, has been influenced by the belief that examination success brings people improved livelihoods and more life opportunities (Liu & Dunne, 2009). Similar to other countries which were facing challenges in developing for the global economy, the government of China broadened educational horizons by advancing new educational visions which included developing students' creativity, problem-solving, and lifelong learning attitudes to improve education quality nationwide (Little, 2000). However, this educational reform was only reflected in the evolution of teaching methods and curriculum without any fundamental changes in the examination system (Gan, 2002). Although many teachers expressed optimistic attitudes towards this reform and willingness to put a student-centred teaching approach into practice (Liu & Dunne, 2009), it was difficult to carry out under the exam-based evaluation system. Therefore, both students and parents were facing high pressure to achieve the high scores needed to enter key senior high schools and stand out in future competitiveness. Consequently, teachers dared not use innovative and learner-centred pedagogies, but instead they maintained traditional teaching methods to guarantee high promotion rates for senior high school (Liu & Dunne, 2009). It has been argued that these issues in the educational reform process originated from the lack of ready-made government guidelines, a complete evaluation standards system and appropriate methodological tools (Peng et al., 2006); thus, the educational inspection system still needs to be improved and developed in China today. Therefore, in order to practically promote students' overall development, a scientific monitoring system with reliable standards and evaluation methods and strong accountability

is needed to guarantee that measures of quality education are implemented effectively and legally (Dello-lacovo, 2009; Xin & Kang, 2012).

Moreover, Zeng et al. (2007) argued that a lack of unified standards for evaluating education quality may not narrow, but instead widen uneven levels of compulsory education quality, because different inspection frameworks tend to give rise to different levels of education quality, particularly between rich and poor areas. Thus, a certain degree of consistency across the country in evaluation methods is needed so that evaluation practices can accommodate the national educational goals (OECD, 2013a). Today, the biggest challenge for China is to improve overall education quality by addressing the gaps in education quality between rural and urban, and impoverished and affluent areas (Zhou, 2017). It has been argued that the gaps in education quality between socio-economically developed and less-developed regions will not be narrowed merely by increasing school inputs in the disadvantaged areas, but also by enhancing the balanced allocation of learning opportunities and educational resources, curriculum and quality of classroom teaching (Zhu et al., 2017). Thus, a united and better evidenced national school inspection framework with a focus on schooling processes may be effective in narrowing gaps in education quality between regions and elevating nationwide education quality. Considering that the contextual issues (e.g. educational reforms in classroom teaching, inequity in education quality, etc.) identified in previous research influence processes of school inspection and educational quality, this study seeks to explore new empirical evidence of stakeholder perspectives in one province regarding contextual issues to inform and support improvements to the content and processes of the school inspection system in China.

Recent research found that the performance level of school inspection in rural schools was much lower than urban schools when measuring the effectiveness of school administration, improvements in education quality, and balanced development of education quality (Li & Zhu, 2016). This suggests that inequity in quality of school inspection implementation might also influence the improvement of school quality between rural and urban areas. Hence, it is necessary to engage in improving school quality by strengthening and optimising the functioning of the current school inspection system in one province by enhancing the quality of school inspection implementation in disadvantaged areas. Additionally, teachers with the highest rank were found to be more likely to improve students' academic achievements than teachers with lower ranks, in comparison with teachers' other characteristics, such as obtained education degree and years of teaching experience (Chu et al., 2015). Thus, participants with different characteristics from urban and rural schools are expected to have

different perceptions on education quality and the school inspection system. This research involves the recruitment of different participants to attend the survey and interviews; this includes headteachers, teachers, and administrative staff members, national and city inspectors, and an education officer, who all possess different expertise in classroom teaching, school management, and educational evaluation and differing practical experience in preparing for and implementing school inspection. Therefore, their perceptions (underpinned by diverse characteristics and socio-economic contexts) can help to clarify the existing issues in the current provincial school inspection practice by identifying the key factors contributing to the quality of school inspection and education. Finally, the original evidence yielded from this research is expected to cast a light on constructing and improving the national school inspection system in China.

1.4.3 Personal Rationale

I was prompted to conduct this research by my previous research experience during my master's degree in China and at the beginning of my Ph.D. study. My master's thesis focused on exploring evaluation standards for compulsory education quality in the Liaoning province of China. When I attempted to review the existing school inspection documents, there was no complete school inspection framework at the national level. Only some of the provincial school inspection frameworks were available and the rest of the provinces had no ready-made school inspection frameworks. This situation was different from other countries like the United Kingdom and the Netherlands, which have developed a complete and comprehensive school inspection system to monitor nationwide school quality. Since then, but prior to conducting my Ph.D. study, I worked to obtain an overall understanding of the quality of compulsory education in China by comparing the existing inspection indicators formulated by 10 provincial inspectorates. To conclude, I drew up conclusions and advice to improve the existing school inspection framework of Liaoning province. However, during that period, no evidence existed regarding stakeholder views on the quality of school inspection content and processes, since the provincial inspection frameworks had only been implemented for a short term. At that time, I believed that the strengths and weaknesses of the inspection framework could only emerge after long-term practice.

Additionally, my master's thesis was focused on one province which ranked in the middle level in terms of economy from among all provinces in China. My research aimed to draw on experience in school inspection frameworks from other provinces which were more developed in economy and education. When I started my Ph.D. project, I became interested in whether the findings regarding effective school inspection indicators that might influence

education quality would be different if I carried out fieldwork in a developed province. Therefore, I expected to obtain more insightful opinions about educational innovation and the experience of school inspection practice from participants from a socio-economically developed area where education quality is higher than developing areas. Also, I hoped to expand my previous research horizon by comprehensively reviewing and testing theoretical approaches and international and local policy documents upon a provincial context in China, which was not carried out in my earlier work due to the limited scope of a master's thesis. This was also an important reason that motivated me to perform a further in-depth research on the Chinese school inspection system.

Finally, even before I started the bachelor's degree, I experienced the pressure to achieve high examination scores, which made me doubt the effectiveness of the existing evaluation system of education quality. The province where I finished my basic education used to be one of the four pilot regions for new curriculum reform in China. Hence, my personal experience of witnessing the practice of school inspectors who inspected our school in order to carry out quality-oriented education reform also inspired me to think about how to improve education quality by strengthening the current school inspection system. At that time, I held a strong belief that students' academic achievements could not completely reflect education quality, as I argued that students' social outcomes (e.g. attitudes to learning, abilities for critical thinking, etc.), teachers' classroom teaching quality and school management would jointly contribute to education quality. Since then, exploring more factors which might affect education quality in China in addition to academic achievement has also been one of my main research interests.

1.5 Research Questions

More specifically this study seeks to address the following research questions from

1) What are stakeholder perceptions on the concept of education quality and the purpose of school inspection? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?
2) What are stakeholder perceptions on the importance of different school inspection indicators of school inspection in order to demonstrate education quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?
3) What are stakeholder perceptions on the importance of different approaches and procedures used in school inspection in order to demonstrate and improve education

quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

4) What are stakeholder perceptions on the strengths and weaknesses of current processes of school inspection to monitor educational quality?
5) What are stakeholder perceptions on how the inspection system could be improved?
6) What are stakeholder perceptions on the policy context of education and the school inspection system that influence education quality?

1.6 Theoretical Framework (Overview)

This study draws on relevant international literature, focusing specifically on theories of educational quality, school effectiveness, and school inspection to inform the research approach and design, and assess its salience for educational stakeholders in China.

Firstly, the study is broadly located within the education quality and effectiveness research field, which comprises studies which address three key elements, including **outcome, process,** and **equity**. Previous research which focuses on quality **outcomes** mainly concerns students' academic raw and value-added scores (White & Barber, 1997) and non-academic outcomes (Madaus et al., 1980). UNICEF (2000) regard a high-quality education as a **process** where "trained teachers use child-centred teaching approaches in well-managed classrooms and schools and skilful assessment facilitates learning and reduces disparities" (p. 3). School effectiveness research has a critical influence on analysis of components of education quality since it is able to disentangle and clarify various interactions between elements contributing to education quality (Sammons, 1994). Specifically, classroom-level factors facilitated by school-level factors directly affect school effectiveness in an ongoing and dynamic schooling process (Creemers & Kyriakides, 2010b; Scheerens, 1990). The effective factors identified in the consensus around school effectiveness theory were also employed by European countries and OECD countries to inform their school inspection frameworks (Ehren et al., 2013; OECD, 2013a; Van Bruggen, 2010), e.g. the opportunity to learn, learning time, achievement orientation, clear and structured teaching, etc. Additionally, **equity** could be ensured by providing each child with fair opportunities to receive a high-quality education (OECD, 2012). "Opportunities to learn" that affect education quality theoretically and practically (Ehren et al., 2013; Kyriakides & Creemers, 2008; Scheerens, 1990) can be achieved by assuring "access to education" in compliance with legal regulations and laws (Slater, 2013), and accommodating students' different needs of learning in schooling processes (Faubert, 2012).

Secondly, the study design is more specifically informed and shaped by the findings from previous research on the purpose and quality of inspection systems. The purposes of school inspection are mainly reflected in this statement: "monitoring for compliance may take place alongside evaluation for accountability and improvement" (Slater, 2013, p. 8). To accommodate inspection purposes, school inspection criteria attempt to give a precise explanation of the dimensions of education quality to be evaluated (Scheerens et al., 2003). In this research, criteria are underpinned by the conceptual and theoretical framework of education quality and effectiveness mentioned above. Also, whether school inspection can realise these aims depends on how school inspection is implemented and which approach is used to collect data on school quality (Scheerens et al., 2003). According to Ehren et al. (2013), the type/frequency of schools inspections, the criteria, and thresholds used to evaluate school quality, feedback provided during school visits, sanctions and rewards play dominant roles in school improvement. In summary, these concepts provide the rationale and framework for investigating the practice of school inspection and its impacts on the education quality within Chinese junior high schools.

1.7 Research Design (Overview)

This research employs a mix-methods design to address the research questions. In order to utilise the advantages and minimize the weaknesses of quantitative and qualitative research, rather than replacing either of them (Johnson & Onwuegbuzie, 2004), the philosophical standpoint of pragmatism is used. Pragmatists claimed that "one approach is better than another at producing anticipated or desired outcomes" (Cherryholmes, 1992, p. 15). In alignment with the viewpoint of pragmatism, post-positivists agreed that knowledge is shaped by the evidence, data, and rationale which are obtained from practical observation and measurement (Phillips & Burbules, 2000). Accordingly, this research examines the factors that were identified in the previous international literature and Chinese school inspection policy documents influencing education and school inspection quality; examination is conducted via a survey and interviews with stakeholders (headteachers, teachers, administrative staffs) in junior high schools and inspectors in one province of China, as well as a national inspector and an education officer. A survey, being cost effect, could enable the researcher to collect a large amount of data within a short period and provide quick and straightforward analysis of data by using software (e.g. SPSS) (Gillham, 2008). A well-structured questionnaire could also reduce the bias yielded from the interviewer effect so as to enhance the consistency and reliability of the research results (Bryman, 2012). Nonetheless, the survey was restricted to items identified in the previous research. Thus, the interview data is also needed, which can "provide full and sensitive descriptions of the experience under

investigation" (Polkinghorne, 1989, p. 47) so as to yield a deeper comprehension of the research question and explain the significant (or non-significant) or surprising quantitative results (Creswell & Clark, 2011).

This research employs an explanatory sequential design which aims to "explain initial quantitative outcomes by employing a qualitative strand" (Cresswell et al., 2003). A non-probability purposive sampling strategy was used for the survey and interviews and judged "fit for purpose" as no ready-set sampling frame was available, as a result of the unknown sampling size of participants. Due to the limited scope of Ph.D. research, it is only possible to administer one quantitative survey in all ten districts of one city (Q city) in Shandong province. All professional education staff (headteachers/school managers, junior/senior teachers, and administrative staff) from the ten selected junior high schools in ten districts (involving urban and rural areas) in Q city was invited to participate in the questionnaire survey. The questionnaires were designed to examine participants' perceptions on the inspection purpose, and the importance of various inspection indicators and procedures for demonstrating and supporting the improvement of education quality. Afterward, statistical analysis methods, such as descriptive analysis, repeat-measures one-way ANOVA, two-way ANOVA, and one-way ANOVA were employed to analyse the quantitative data. In the qualitative strand, semi-structured interviews were conducted with thirteen participants (including junior/senior teachers and headteachers from three junior high schools, school inspectors, and a policymaker). More details about the study population and context are included in Chapter 4. Data regarding the strengths and weaknesses of the process of school inspection, suggestions for improvement of the school inspection system, and the policy context of education and the school inspection system that affect education quality were collected during the interview. Then, a qualitative thematic analysis was used to analyse the interview data. Finally, a reflexive account of the whole research process addressing the issue of researcher bias is presented.

1.8 An Outline of this Dissertation

This dissertation is organised into eight chapters. This current chapter presented a brief introduction of research background and nature of research problem, described the research aim and six specific research objectives, provided the academic, local and personal rationale, introduced six research questions, and briefly overviewed the theoretical framework, the rationale for the selected research methods, and the structure of the whole thesis.

Chapter 2 includes an analytic account and review of the international literature regarding concepts and frameworks of education quality, school effectiveness, and inspection systems,

highlighting relevant theory and findings. The review of the international literature identifies effective indicators contributing to school effectiveness and inspection frameworks of European and OECD countries, school inspection purposes, and consequences brought about by school inspection in relation to the quality of the inspection. Finally, an international conceptual framework is presented by synthesising related theories to provide the rationale and framework for investigating school inspection practice in China.

Chapter 3 positions the research in the context of China. It provides a brief review of the development of the compulsory education system and the school inspection system in China. Next, a critical account of the current implementation of educational innovations and national and provincial school inspection frameworks and procedures is presented, followed by discussion of the consequences of the process of school inspection. This chapter concludes by identifying the gap in previous literature which will be addressed in this research. It then discusses research inquiries through comprehensively reviewing and comparing the school inspection framework of one province with international and local literature.

Chapter 4 presents the full details of the research design and methodology that are employed to address the research questions. This chapter identifies pragmatism as the underlying philosophical approach to justify the combination of quantitative and qualitative methods in this study; this approach is typically associated with post-positivism. The chapter elaborates how this was applied in different sections of the research and then explains and elaborates the decisions made around research sampling, methods, and procedures of data collection; the process of designing and piloting instruments for survey and interviews; and methods of data analysis. Also, decisions on how to address ethical issues and ensure the validity of the research are presented at the end of the chapter, as well as potential methodological limitations.

Chapter 5 presents and discusses the quantitative results to address RQs 1 to 3 concerning the views of stakeholders in one provincial city regarding the purpose of school inspection, the importance of different school inspection indicators for demonstrating education quality, and the importance of different approaches and procedures used in school inspection to demonstrate and improve education quality. More attention is paid to the differences in perceptions of participants from the urban area and rural area and participants with junior and senior professional titles.

Chapter 6 includes the presentation of the qualitative research findings that expand on the quantitative evidence addressing RQ1-3 and also addresses RQ4-6. The evidence reports an

analysis of the views of stakeholders in one provincial city on the concept of education quality and the purpose of school inspection (RQ1), on the strengths and weaknesses of current processes of school inspection for monitoring educational quality (RQ4), on how the inspection system could be improved (RQ5), and on the policy context of education and school inspection that influence education quality (RQ6). Additionally, the evidence provided by interviewees is also used to triangulate with previous quantitative findings and explain significant or surprising statistical results from Chapter 5.

Chapter 7 includes a discussion of the research findings presented in Chapter 5 and 6 in relation to the previous literature. The discussion compares and triangulates the quantitative findings with the qualitative findings.

Chapter 8 will present the implications of this research for enriching the theoretical literature and the improving education and school inspection systems in China. The original contributions of this research, the limitations of this research, as well as suggestions for future research will be also mentioned at the end of the chapter.

Chapter 2 Literature Review

2.1 Introduction

This chapter provides an in-depth and critical review of international theories and policy documents around education quality and school inspection systems. A theoretical framework is also outlined through synthesising relevant theories, research findings and critical factors that influence education quality and the practice of school inspection in order to support the rationale and research design of the empirical study. The chapter begins with a discussion of the concept of education quality in order to illustrate its key components, which include outcomes, process, and equity. The following section highlights the common focuses of education quality frameworks found in the international literature which resonate with the concept of education. Also, relevant school effectiveness research is reviewed to identify the key factors and their various interactions which have had a critical influence on analysing components of education quality. This account is provided to deepen understanding of the way in which school processes affect students' outcomes. The key contributors to education quality underlying the schooling process are typically used to inform the school inspection frameworks formulated by the European and OECD countries. The following section discusses the distinct characteristics of the school inspection system in western countries in terms of school inspection purposes, procedures employed in school inspection, and the impact of school inspection on education quality. The gaps in the international literature that this study seeks to address via specific study research questions are also pointed out. The next section illustrates the main dimensions of the theoretical framework that informs the current study by highlighting the links between the factors recognised in previous literature and policy documents in the western countries. This chapter ends with a summary of how to define education quality and the typical characteristics of the school inspection systems, which are underpinned by previous empirical findings and current policy documents in the international literature.

2.2 Education Quality Theory

2.2.1 Concept of Education Quality

2.2.1.1 Education Quality as "Outcome"

The concept of educational quality is central to the aims of this study and specifically to the main focus on school inspection. Education quality is often defined as equivalent to educational effectiveness, signifying "the production of a desired result or outcome" (Levine & Lezotte, 1990, p. 23). In other words, it refers to the extent to which conformity between

the outcomes and the objectives is accomplished (Madaus et al., 1980). Thus, students' outcomes are an important indicator of school effectiveness, suggesting what students have acquired from the schooling process (Madaus et al., 1980). External examinations are the main way to obtain such outcomes, indicating in the form of test scores, whether students can or cannot read or can or cannot recite poetry, to give a few examples (White & Barber, 1997). In addition to raw scores, value-added measures of student progress are more accurate and informative tool to analyse students' progress in academic achievement during their time at school. It provides more detailed information about individuals, school performance and sub-groups of pupils within a school by proving comparative measures across representative samples within and between schools (Scheerens et al., 2003). However, the actual value that school adds to students' learning still remains arguable or uncertain to some extent and the models are still under development, which might be liable to produce errors of evaluation outcomes (Donaldson & Johnson, 2010).

Some outcomes could also be assessed and yield non-statistical data, which is separated from score results, due to the diversity of interaction within the schooling processes. Interactions with teachers, peer groups, and resources might have an influence on for example pupils' attitudes, values, motivation, self-esteem (Madaus et al., 1980). Moreover, the concept that children possess multiple intelligences has been gradually accepted (Gardner, 1983). Thus, more effective instruments need to be developed in order to meet the demands of students' overall development in a broader range of academic and social areas (Gray et al., 1996). Accordingly, the components of students' outcomes tend to include academic test scores but also affective outcomes (UNESCO, 2004). Thus, this research recognises and will discuss the range of student outcomes as mentioned above in order to obtain a more comprehensive picture of educational outcomes.

2.2.1.2 Education Quality as "Process"

The concept of education quality should not be narrowed down to the effectiveness framework which defines quality as mere student outcomes without sufficiently considering the education process and context (Alexander, 2008). In this study, educational quality, is also seen as a complex system in the context of policy, culture, and economy, and a process where "trained teachers use child-centred teaching approaches in well-managed classrooms and schools and skilful assessment facilitates learning and reduce disparities" (UNICEF, 2000, p. 1). Here the process mainly refers to the schooling process, consisting of many factors connected with schooling which will affect student outcomes (Willms, 1992). Usually, only focusing on one particular dimension of educational practice to improve educational

quality tends to fail, since ignoring the interaction between components and social context features might set limitations on addressing issues of improving education quality (Chapman & Carrier, 1990). That is why it is suggested that measurable indicators, such as teachers' qualifications or outcomes, such as student exam scores, cannot be seen as the sole standard to evaluate education quality.

Considering that school and classroom processes play a crucial role in promoting school effectiveness, researchers therefore continuously seek to figure out which of these processes could contribute to improving education quality (Reynolds et al., 1993). However, the process of studying "schooling process" itself is seen as a complex system which "can never represent the richness and complexity of reality" (Madaus et al., 1980, p. 16). "Process" studies can only be conducted by simplifying the procedures by selecting some variables for study. The school-based factors presented in interactions with different processes within the schooling process might be more convincing than those status factors, such as size or property of schools, in affecting students' outcomes (Bloom, 1976). Therefore, effective schooling itself should be regarded as a dynamic and ongoing process (Kyriakides, 2012) where effective process factors would be taken into the major consideration in influencing education quality.

2.2.1.3 Education Quality as "Equity"

Educational *equality* focuses on equality of results as demanded by the democratic pursuit of social justice, but differs from *equity*, which requires fair competition but can tolerate unequal results (Strike, 1985). More specifically, equity emphasises that the resource is allocated proportionally based on one's need, efforts, or available resources and opportunities (Messick & Cook, 1983; Tornblom, 1992). Equity could be realised with the demonstration of two aspects of justice: first, distribution of educational resources according to an individual's contribution and needs and second, the fairness of the procedures with consistency, prevention of personal bias, and representation of considerable subgroups (Deutsch, 1975; Leventhal, 1980). Regarding education quality, variations exist in different education systems, even within the same education system due to the diversity of contexts, for instance, private and public schools, urban and rural areas, and so on (Ross & Genevois, 2006). China is striving to broaden every learner's access to high-quality education by ensuring fairness in the schooling process whereby students in the different subgroups (e.g. with diverse family backgrounds, social resources, etc.) are treated equally and share equal educational resources. Although long-run educational reforms have gradually improved education quality in China, the imbalanced distribution of education quality between

developed and less developed provinces, the urban and rural areas, and the coastal and remote regions remains and will probably exist for a long time (State Council, 2010). This also functions as one of the starting points for this research in focusing on improving overall education quality in China by exploring the imbalanced developmental status of education quality across different regions.

OECD (2012) stated that a successful and healthy education system paid attention to both equity and quality in order to offer each child a fair opportunity to receive a high-quality education. Nonetheless, in the Chinese context, promoting education quality may not promote education equity, and it may even hinder education equity (Hannum, 1999). This is because the gaps between developed regions and less developed regions can be further expanded when emphasising the improvement of education quality in relatively developed regions but ignoring less developed regions. In other words, any measures applied in improving educational quality that do not sufficiently consider the enhancement of education quality in disadvantaged areas may be less effective than comprehensive improvements to education quality across the whole country (Mu et al., 2013). In summary, in the Chinese context of this study, it is argued educational quality can only be improved in practice when the education quality gap between developed and less developed provinces is sufficiently narrowed.

2.2.2 International Theoretical Framework of Education Quality

There is no comprehensive understanding of education quality across different contexts which have various educational goals, although the content of some voluntary international agreements points to a consensus on some aspects. In the Dakar Framework, UNICEF categorised education quality into five dimensions, including learners, environments, content, processes, and outcomes (UNESCO, 2005). The main target of this framework is obtaining complete access to free compulsory education for child minority groups (UNESCO, 2005). On the basis of the Dakar Framework, UNESCO (2016) proposed a new framework for understanding education quality with the "education system" added as a distinct element separate from the original general context dimension. Additionally, it included inclusion-related indicators to ensure every student's rights to access high-quality, compulsory education in the schooling process regardless of his or her socioeconomic background; this broadened this framework's scope for monitoring education quality. Because education quality is also defined as "the opportunities to develop the greater capability that is afforded to different individuals and groups through the processes of teaching and learning" (Tikly & Barrett, 2013, p. 22), individual's learning opportunities should also be guaranteed in the

teaching and learning processes. In China, free compulsory education has been applied across the whole country, so ensuring all students have equal opportunities to access a high-quality education has thus become a new focus in educational development.

The World Bank (2018) indicated that schooling would not necessarily bring about high-quality education if it does not reward students with steady progress in learning. The lack of key school-level factors was seen as the direct causes for failing learners and undermining schooling quality, which might even amplify inequality in learning outcomes, particularly for disadvantaged students. Factors including learners, teachers, school inputs, and management have been demonstrated to be influential in achieving substantial improvements in learning. Likewise, UNESCO presented a framework to understand, monitor and improve education quality which centred on learning as well. Specifically, the framework built up connections between components in a whole schooling system based on learner-teacher relationships (Pigozzi, 2006). According to Pigozzi (2006), this framework is divided into two levels: the level of learners regarding the learning environment and the level of the system concerning support for the learning experience. The learner's level covers seeking out learners, what the learner brings, content, processes and environment, and the system level includes the managerial and administrative system, implementation of 'good policies', supportive legislative framework, resources and means to measure learning outcomes.

UNICEF (2000) takes a broader perspective on education quality, defined here as a complex system where children are enabled to acquire relevant knowledge, capabilities, and appropriate attitudes to create places for people to live safe, secure, and healthily interactive lives (Bernard, 1999). Education quality was classified by five aspects, including quality learner, quality learning environment, quality content, quality processes, and quality outcomes. These dimensions are not independent but rather are related to each other (UNICEF, 2000). Furthermore, this definition also considers the international impact, as well as national and local contexts in various countries, which propels discussion regarding understandings of education quality (Adams, 1993).

All the frameworks mentioned above consist of a broader range of factors which might influence education quality in terms of student outcomes, schooling process, and educational equity, which is in alignment with the concept of education quality present in this research. Based on the basic concepts of education quality, the similarities and differences between the frameworks above and their links with research on educational effectiveness models and school inspection frameworks in the international context will be discussed in the following

sections. Also, the concept of education quality, including outcome, process, and equity, will be employed to critique and map the content of school inspection in section 2.4.2.

2.2.2.1 Outcomes

With regard to academic achievements, literacy and numeracy are indicated in all four of the above-mentioned frameworks, since developing students' abilities in reading, writing, and calculating is seen as the primary purpose of formal education (UNICEF, 2000). UNICEF (2000) presented social outcomes regarding community participation and learner confidence, which emphasised education for citizenship, skills of behavioural development, and psychosocial and interpersonal skills. In the view of Deketele (2000), education for citizenship refers to respecting human rights, working cooperatively in a team, and demonstrating responsibility for one's community. It is also reflected in the dimensions of global citizenship (UNESCO, 2016), relationship skills (The World Bank, 2018), values, self-awareness, and self-discipline (Pigozzi, 2006). In the view of The World Bank (2018), cognitive skills and social outcomes strengthen each other in that learners with good social competencies are more likely to acquire cognitive skills and positive relationships with others. According to Van Bruggen (2010), examination outcomes and general results are the most recognised outcomes among the inspection frameworks of 18 European countries. UNICEF (2000) claimed that experiential approaches could be applied to achieve the desired outcomes, which is aligned with the dimension "behaviours" for an emphasis on using learned knowledge to solve problems (Pigozzi, 2006). The problem-solving skills were also seen as one of the key competencies in The World Bank (2018)'s framework. Additionally, UNESCO (2016) presented critical abilities and UNICEF (2000) considered health outcomes in order to evaluate education quality in terms of outcomes, which were reflected in OECD countries' school inspection frameworks (OECD, 2013a).

Table 2.1: Key Similarities and Differences in Indictors Regarding Outcomes Identified in Four International Frameworks of Education Quality

Key Factors	The World Bank (2018)	UNESCO (2016)	Pigozzi (2006)	UNICEF (2000)
Cognitive skills	General academic (literacy, numeracy)	Learning achievement	Literacy, numeracy, core subject knowledge	Achievement in literacy and numeracy
Social outcomes/Value		Collaborative skills	Work in teams, solidary	Community participation
	Relationship skills		Tolerance and mutual understanding	
	Communication		Live together and interact with those who are different	
		Global citizenship	Respect for human life, right and dignity	Learner confidence
	Self-awareness		Learners are given dignity and develop self-esteem	
	Self-management		Learners have sense of self-discipline	
Key competencies	Problem-solving		How to solve problems	
			Experiment	Experiential approaches to achieving desired outcomes
		Critical thinking skills		
Well-being				Health outcomes

Note: Source: **The World Bank, W. (2018).** *Learning to Realise Education's Promise*. Retrieved from Washington, DC; **UNESCO. (2016).** *Education for People and Planet: Creating Sustainable Futures for All*; **Pigozzi, M. J. (2006).** What is the 'qualtiy of education' (A UNESCO perspective). In K. N. Ross & I. J. Genevois (Eds.), *Cross-national studies of the quality of education: Planning their design and managing their impact* (pp. 39-50). Paris: International Institute for Educational Planning; **UNICEF. (2000).** *Defining Quality in Education.* Paper presented at the The International Working Group in Education, Florence, Italy.

2.2.2.2 Processes

- Classroom teaching

According to Pigozzi (2006), "what the learner brings" indicates that all the students with different talents, characteristics, and interests could adapt themselves to acquire various abilities, experiences, and practices to reach learning objects in personalised ways. Although students' personal natures could also affect educational outcomes (UNICEF, 2000), these natures are influenced by the experiences that the learners undergo before attending school. However, The World Bank (2018) contended that the schooling can broaden the social gap between students rather than narrowing it. Thus, it is important to explore how schools can positively influence students and work to achieve social transformation and inclusion by compensating for students' background characteristics (Murillo & Román, 2011).

Second, regarding the dimension "teaching and learning processes", Pigozzi (2006) and UNESCO (2016) stressed structured instruction, which was recognised as an effective factor to improve students' cognitive attainment (Kyriakides & Creemers, 2008; Muijs & Reynolds, 2005; Scheerens, 1990). Furthermore, what is noteworthy is that all the frameworks accentuate learner-centred teaching processes where what is being learned and how this is being learned was emphasised more than sole schooling (Tawil et al., 2012; The World Bank, 2018).

Next, teachers' motivation with incentives (e.g. working conditions) were perceived to increase learning (The World Bank, 2018),) especially for the disadvantaged schools (OECD, 2012); this factor was mentioned in three of the frameworks (see table 2.2). Similarly, both The World Bank (2018) and UNICEF (2000) highlighted the critical role of continuous professional development in strengthening teachers' quality and ability to adapt their skills and knowledge to schools' and students' needs. Teachers' professional development also serves as one of the key contributors to effective schools (Sammons, 2007; Teddlie & Reynolds, 2000).

Lastly, assessment was included in three frameworks. Although both summative and formative assessment are valuable and integral in the learning process (OECD, 2012), reliable and timely assessments are effective to provide feedback on innovations (The World Bank, 2018). This concept is also indicated in Scheerens (1990) model and appears as a shared

focus on education quality within European national inspection frameworks (Ehren et al., 2013; Van Bruggen, 2010), stressing that frequent monitoring and feedback can strengthen students' motivation for learning.

Table 2.2: Key Similarities and Differences in Indicators Regarding Processes (Classroom Teaching) Identified in Four International Frameworks of Education Quality

Key Factors	The World Bank (2018)	UNESCO (2016)	Pigozzi (2006)	UNICEF (2000)
Learners' nature	Health and nutrition	Health and nutrition		Good health and nutrition
	Motivation	Stimulating home environment	Characteristics	Early childhood psychosocial development experiences
		Abilities to learn	Skills and conditions experiences	Regular attendance for learning
Teaching and learning processes		Well-prepared pedagogy	Structured instruction	
	Using new technologies to facilitate teaching			Using technologies to decrease rather than increase disparities
	Teacher-learner relationship	Interactions focused on learning	Learner-centred teaching methods	Continuing support for student-centred learning
				Active, standard-based participation methods
Teacher	Professional development			Ongoing professional development
	Motivation: incentives	Motivated		Teachers' working conditions
Assessment	Reliable Assessment	Assessment for learning		Using formative assessment to improve achievement outcomes

Note: Source: see table 2.1

- School management

The dimension regarding school management plays a key role in constructing a friendly and well-run organisation and coordinating the relationship between community, parents, teaching staff, and administrators in order to foster positive student outcomes at the system level (Pigozzi, 2006). Specifically, teachers who are directly influenced by school leaders and parents may be more likely to respond to student needs immediately; conversely, communities which are better informed by the needs of local schools would be able to better accommodate these needs (The World Bank, 2018). All four frameworks indicated a factor concerning parents' engagement in education, which was validated as key to influencing school effectiveness (Sammons, 2007; Teddlie & Reynolds, 2000). Also, collaboration between teachers (UNICEF, 2000) that facilitates enhancing teachers' professional development and promotes the teaching and learning process (Gu, 2014; Kyriakides, 2012) was employed by many European inspectorates to evaluate education quality (Ehren et al., 2013).

Next, although the school input factor regarding school infrastructure and educational resources was mentioned by all four frameworks, simply increasing the resources available at schools will not yield improvement in learning if the resources do not improve teacher-

learner interaction (The World Bank, 2018). This was also indicated by Hanushek (1986), who claimed that the relationship between teaching and learning and school management in the schooling process was more important than school inputs to explain the difference in school quality. A school environment which is concerned with students' physical safety and mental health (Pigozzi, 2006; UNICEF, 2000) is essential in OECD countries, where safety issues are indicated as a key factor influencing education quality (OECD (2011). The factor "orderly atmosphere" demonstrates that it is essential to apply "effective school discipline policies" in constructing a well-managed school and classroom (UNICEF, 2000). It was also indicated in the integrated model, where students are required to comply with school disciplinary procedures (Scheerens, 1990). Both factors of learning climate and orderly environment contribute to the inspection frameworks of six European countries (Ehren et al., 2013).

Table 2.3 Key Similarities and Differences in Indicators Regarding Processes (School Management) Identified in Four International Frameworks of Education Quality

Key Factors	The World Bank (2018)	UNESCO (2016)	Pigozzi (2006)	UNICEF (2000)
School management	School-based management		Managerial and administrative system	Administrative support and leadership
Collaboration	Community monitoring	Fostering collaboration	Collaboration and interaction between teachers, school and community	
	Using technology to enhance communication with parents	Parental engagement	Families and communities are engaged in education	Family support for learning
School inputs	School infrastructure	Water and hygiene	Financial, human, and time resources	Interaction between school infrastructure and other quality dimensions
	Teaching materials	Teaching and learning materials, technology, facilities		Quality of school facilities
School environment		Culture of peace and non-violence	Non-violence, safe environment for learners' physical and mental health	Non-violence, peaceful, safe environments
			Orderly atmosphere	Effective school discipline policies

Note: Source: see table 2.1

2.2.2.3 Equity

In the framework of Pigozzi (2006), the dimension "equity", found in supportive legislative frameworks, ensures that learners get access to education, and they are treated equally without suffering discrimination in the schooling process. In considering the four frameworks, all of them started to shift focus from ensuring equal accessibility to education towards guaranteeing equity in the schooling processes in that teachers use different teaching strategies to accommodate students' diverse needs. The key principle in satisfying the learning needs of various students is to help teachers target their teaching to the levels of students, for example, providing remedial lessons for the lower-performing students (The

World Bank, 2018). In this way, the gap between advantaged and disadvantaged students in learning opportunities can be narrowed through classroom teaching so as to improve equity. "Opportunity to learn" was also an essential component of an effective school (Scheerens, 2009) and was also considered in the school inspection frameworks of European countries (Ehren et al., 2013; Van Bruggen, 2010). Additionally, UNICEF (2000) pointed at teachers' beliefs that all students can learn, which aligns with "high expectations" in school effectiveness research models (Sammons, 2007; Scheerens, 1990; Teddlie & Reynolds, 2000). Overall, equity is reflected in indicators regarding legislative regulation, teaching processes, and environment.

Table 2.4 Key Similarities and Differences in Indicators Regarding Equity Identified in Four International Frameworks of Education Quality

Key Factors	The World Bank (2018)	UNESCO (2016)	Pigozzi (2006)	UNICEF (2000)
Access			Supportive legislative framework	
			The obligations of provision of education- access and quality	
Process		Attention to diversity		Inclusive environments
	Teach to the level of students	Various teaching strategies	How different learners in the same group are treated	Teachers beliefs that all students can learn

Note: Source: see table 2.1

Therefore, the key factors originated from four frameworks are synthesized into one framework of education quality by mapping them against the basic concept of education quality in terms of outcomes, process, and equity. The synthesized framework is shown below (see table 2.5).

Table 2.5 Summarized Key Indicators Identified by Synthesizing Four International Frameworks of Education Quality

Outcomes	**Academic Achievement** • Achievement in literacy and numeracy **Social Outcomes** • Values: tolerance, mutual understanding, non-violence • Skills or competences: collaborative skills, relationship skills, to Experiential approaches to achieving desired outcomes, critical thinking abilities • Outcomes related to community participation, and learner confidence **Students' Health Outcome** • Students' physical health • Students' mental health
Processes: Classroom Teaching	**Classroom Teaching** • Structured teaching • Teacher-learner relationship • Continuous support for student-centred learning **Teachers' Development** • Teacher motivation • Ongoing professional development • Reliable assessment
Processes: School Management	**Environment** • Safe environments • Effective school discipline policies to maintain orderly environment • Non-violence • Students' health **Supervision and support** • Administrative support and leadership • Collaboration and interaction between teachers • Collaboration between school and parents and community
Equity	**Processes** • Teachers' beliefs that all students can learn • Teach to the level of students • Inclusive environment **Supportive legislative framework** • The obligations of provision of education- access and quality

2.3 School Effectiveness Theory

School effectiveness research (SER) is clearly reflected in the quality frameworks critiqued above and it has had a critical influence on analysing components of education quality since it has sought to disentangle and clarify various interactions between elements contributing to education quality (Sammons, 1994). Moreover, educational effectiveness studies can help to deepen understanding of the way in which school processes affect students' outcomes for good or ill (Sammons, Thomas, et al., 1997). In the process of development of educational effectiveness theory, many theoretical models emerged; from among these modes, the key effective factors embedded in the schooling process were identified and extracted to inform this research.

2.3.1 Process-factors in School Effectiveness Models

In the educational process, classroom teaching quality, teacher-student-curriculum interaction, and the administrative business of a school are increasingly seen as more important than school inputs to explain the differences in school quality (Hanushek, 1986). In a review of related literature and studies on effective schools during the last 30 years, eight general factors emerging from the schooling process were identified (Sammons, 2007). Teddlie and Reynolds (2000) also recognised nine process areas that were identified via researching successful practices applied in highly effective schools in the US and in the UK. The common features of effective schools contributing to high-quality school are reflected in **eight areas**. These eight areas cover the overall schooling process, including positive school culture, effective leadership, appropriate monitoring at all level, and appropriate parental involvement at the school level; at the classroom level, areas include a focus on students' learning, effective processes of teaching, professional development of staff's practical skills, and high expectations for all students. Although SER pays more attention to factors at the classroom level, the processes outcomes in a school and in an educational system as a whole were also considered essential to impact school effectiveness (Creemers & Reezigt, 1996).

Table 2.6 Common Effective-school Factors Identified in Two School Effectiveness Models

Sammons (2007)	Teddlie & Reynolds (2000)
Productive climate & culture	Producing a positive school culture
Focus on central learning skills	Developing & maintaining a pervasive focus on learning
Professional leadership	The processes of effective leadership
Effective instructional arrangements	The processes of effective teaching
Appropriate monitoring	Monitoring progress at all levels
Practice-oriented staff development	Developing staff skills at the school site
High expectations	Creating high & appropriate expectation for all
Parental involvement	Involving parents in productive & appropriate ways
	Emphasizing responsibilities & rights

Note: Source: **Sammons, P. (2007).** *School Effectiveness and Equity-Making connections: A review of school effectiveness and improvement research-its implications for practitioners and policy makers*. UK: CfBT Education Trust; **Teddlie, C., & Reynolds, D. (2000).** *The International Handbook of School Effectiveness Research* London: Falmer.

In Scheerens (2015) latest integrated multilevel model of education, the conceptual structure of educational effectiveness is seen as a hierarchical system. In this system, the core schooling processes at a lower level are contextualised and controlled by a higher level of the system. However, the lower level processes still have considerable autonomy, which means that "what can be reasonably accomplished at a lower level should not be carried out by a higher level" (p. 12). Thus, the main focus of educational effectiveness is still on the school level, despite additional processes in a multilevel framework which look at the overall effectiveness of integrating system, school and teaching effectiveness (Scheerens, 2015). More than 25 years ago, Scheerens (1990) proposed the integrated model (IM), which indicated that both factors at the school level and at the classroom level contribute to the schooling process. More recently, Creemers and Kyriakides (2010b) proposed the dynamic model (DM), which regarded effective schooling as a dynamic and ongoing process; this model has started to inspire empirical research. They took the dynamic nature of educational effectiveness into consideration because the interaction between the factors at different levels was more complex than what was found in Scheerens (1990) integrated model.

Regarding the relationship between the school and classroom levels, it can be assumed that the school level facilitates the classroom level (Scheerens, 1990). More specifically, teaching processes play the most direct role in learning and outcomes, while the organizational and curriculum conditions at the school level have more indirect influences on educational achievement (Scheerens, 1990). Teaching and learning as dynamic processes were continuously required to adapt to changes in opportunities and needs (Kyriakides, 2012). The DM was built based on the assumption that the school-level factors were estimated to have effects on the classroom-level factors, particularly on teaching practice (Kyriakides & Creemers, 2008). Regarding the process factors of school effectiveness, school-level factors and classroom-level factors are closely related to each other and jointly contribute to the schooling process, which is consistent with the concept of education quality as a schooling process (see section 2.1.1.2).

2.3.1.1 School-Level Factors

School-level factors refer to organizational and curricular conditions in IM and school policy for creating school learning climate in DM (Creemers & Kyriakides, 2010b). The detailed indicators at the school level in both models are shown below (see table 2.7). First, both models mentioned **collaboration and interaction between teachers** which has positive

influences on teaching practice and students' learning by strengthening teachers' professional development (Gu, 2014; Kyriakides, 2012). Second, both models examined the impacts of **school climate** on student outcomes. School climate was supported by values in favour of learning and achievement-oriented policy that was used to maintain an orderly atmosphere. Also as indicated in IM, **effective leadership** may enhance student learning by improving teachers' teaching practice (Day et al., 2009). Third, the indicator "provision of sufficient **learning resources** to students and teachers" mentioned in DM pointed at teaching aids and educational assistance (Creemers & Kyriakides, 2010b), which were specified in IM with teaching methods, textbook, and curriculum covered (Scheerens, 2000). The accessibility of learning resources might not only influence students' learning but also contribute to teachers' professional development (Scheerens, 2000).

Table 2.7: Key Similarities and Differences in School-level Factors Identified in IM and DM

	IM Schreerens (1990)	DM Kyriakides and Creemers (2008)
1	Degree of achievement-oriented policy	Student behavior outside the classroom
2	Educational leadership	Collaboration and interaction between teachers
3	Consensus, cooperative planning of teachers	Partnership policy
4	Quality of school curricula in terms of content covered, and formal structure	Provision of sufficient learning resources to students and teachers
5	Orderly atmosphere	Values in favor of learning

Note: Source: **Scheerens, J. (1990).** School Effectiveness Research and the Development of Process Indicators of School Functioning. *School Effectiveness and School Improvement, 1*(1), 61-80. **Kyriakides, L., & Creemers, B. P. M. (2008).** Using a multidimensional approach to measure the impact of classroom level factors upon student achievement: A study testing the validity of the dynamic model. *School Effectiveness and School Improvement, 19*, 183–205.

2.3.1.2 Classroom-Level Factors

Classroom-level indicators in IM and DM mainly lie in instructional effectiveness in the classroom, which emphasizes that teaching factors are supposed to influence students' outcomes (Creemers & Kyriakides, 2010a; Scheerens, 1990). A comparison of the indicators at the classroom level in the two models is shown below (see table 2.8). As is shown in table 2.8, both models require schools to observe curriculum policy to ensure students' **"opportunity to learn"** (Kyriakides, 2012). Moreover, both models regard "time" as the key to influencing students' learning. However, DM figured out new components (e.g. the management of teaching time, homework and lesson schedule, etc.) contributing to the previous general factor time-on-task in IM, which were changed into **effective learning time** (Creemers & Kyriakides, 2010b). According to DM, effective schools are expected to maximize the use of teaching time and learning opportunities because teachers need to ensure that they maximize teaching hours rather than keeping the classroom in order (Kyriakides, 2012). Although teachers could control the time spent in effective teaching and have a

positive attitude towards teaching, it is students who make the final decisions on how much time is spent learning and what attitudes they keep towards learning (Creemers, 1994). Therefore, effective learning time is a critical contributor to the dimension "quantity of teaching".

Classroom-level indicators of DM are derived from teacher effectiveness research (TER) e.g. (Muijs & Reynolds, 2005; Rosenshine & Stevens, 1986). The dimension "quality of teaching" in DM was closely related to classroom-level factors, such as observable teaching behaviors in the classroom, which might influence teachers' instructional roles and students' outcomes (Creemers & Kyriakides, 2010a). Especially for those effective schools, teachers are expected to improve students' outcomes through effective teaching practice (Creemers & Kyriakides, 2010b). TER has been "the casualty and the beneficiary of the belief in school effectiveness" (Campbell et al., 2003, p. 350) because TER facilitates SER by identifying classroom-level factors to "contribute the greatest amount to variance in pupil outcome" (Scheerens & Bosker, 1997). Campbell et al. (2003) defined teacher effectiveness as follows: "the power to realize socially valued objectives agreed for teacher' work, especially, but not exclusively, the work concerned with enabling pupils to learn" (p. 354). Among the rest of indicators in IM, only **"structured teaching"** can be found aligned with "structuring" of "quality of teaching" in DM. The natures of "structured teaching" were also identified as particularly related to improving cognitive attainment of basic skills, especially in schools where disadvantaged students are in a higher proportion (Muijs & Reynolds, 2005; Scheerens, 1992). "High expectations for pupils' progress" and "reinforcement" were not mentioned in DM. In view of Scheerens (1990), frequent interventions are adopted to favour students' learning process and facilitate "structured instruction", while the DM emphasised that educational objectives should be clear, and different units of the lesson should be linked consistently to achieve "structuring" (Scheerens et al., 2007).

Table 2.8: Key Similarities and Differences in Classroom-level Factors Identified in IM and DM

	IM Schreerens (1990)	DM Kyriakides and Creemers (2008)
1	Time-on-task	Quantity of teaching
2	Structured teaching	Provision of learning opportunities
3	Opportunity to learn	Quality of teaching
4	High expectations of pupils' progress	
5	Reinforcement	

Note: Source: see table 2.7

Through reviews of SER literature, seven common factors at the school and the classroom level emerging from the two process-oriented models (IM and DM) are drawn on to inform this research. The seven factors include collaboration and interaction between teachers, school environment, opportunity to learn, effective learning time, structured teaching, accessibility of learning resources, and reinforcement. The seven effective factors were synthesised with the previously-reviewed eight common dimensions of the effective school (see page 24). Finally, eleven effective factors were abstracted, in order to summarise and reflect the findings of the studies reviewed above in terms of adequate evidence contributing to school quality.

Table 2.9: Summarized Key School Effectiveness Factors Identified by Synthesising IM, DM and Effective-school Factors

School-level factors	Classroom-level factors
Collaboration and interaction between teachers	Structured teaching
Positive school climate	Effective learning time
Effective leadership	Opportunity to learn
Appropriate parental involvement	Professional development of staff's practical skills
Reinforcement	Accessibility of learning resources
	A high expectation for all students

2.3.2 Critical Views on School Effectiveness Research

The studies on SER mentioned above illustrates how the key school-level and classroom-level factors interact with each other to affect school effectiveness, but some aspects of SER have long been criticised.

The first limitation of SER lies in that it cannot appropriately respond to educational goals since the tests are only used to address student cognitive development and so ignore broader non-cognitive results, such as citizenship (Luyten et al., 2005). Although students' academic results are a major factor in evaluating education quality, education should still prepare students for the labour market and broader life. Thus, such a picture of education quality with mere cognitive outcomes is incomplete and biased; it is thus essential to develop more reliable instruments to measure the effects of non-cognitive results on education quality (Gray et al., 1996). This provides the rationale for the research to investigate the importance of non-cognitive outcomes to demonstrate education quality in addition to academic scores.

The second criticism stems from SER's limitation in using a large-scale quantitative method which tends to oversimplify the complexity of school effects and educational reality (Thrupp, 2001). School performance is not only influenced by the nature of school-level factors, but it can also be explained by the social, cultural, and economic factors which underpin school

contexts (Lauder et al., 1998; Lingard et al., 1998). Thus, many researchers call for more small-scale and in-depth qualitative research on actual schooling processes which are perceived to potentially influence school quality, considering that relying exclusively on a survey tool is not adequate for clarifying the interrelationship between processes within schools. In this research, after performing surveys and statistical analysis to test the importance of each indicator in demonstrating education quality, qualitative interviews were conducted to further explore participants' perceptions, which were underpinned by the context where school inspection and education reforms were conducted; this was seen as a potential influence on education quality and supplement for the previous quantitative findings.

Last but not the least, although SER demonstrated that school context does influence school performance (Teddie et al., 2000), more insights into how and why the school context interacts with school-level and classroom-level factors and with school performance are needed (Luyten et al., 2005). The differences in school effectiveness are potentially explained by strongly interrelated factors rather than the separate and individual factors, for example, students with different backgrounds play a key role in constructing school culture by interacting with the school environment (Lingard et al., 1998). However, how the diversity of student characteristics within the school promotes or blocks schooling processes and student outcomes have not received enough attention from SER. Additionally, teaching quality contributes considerably to school effects on student academic performance, given that teaching quality could explain a considerable amount of performance variation between schools (Luyten et al., 2005). According to the prior research, substantial differences exist among teachers within schools; therefore, SER pays more attention to teachers who have a direct impact on the variance of learning outcomes. Thus, the differences in school contexts were also considered in this research to explain participants' different perceptions of the importance of each factor to demonstrate education quality. The contextual differences were particularly concerning the school location and teachers' professional titles, both of which might affect school performance.

2.3.3 School Effectiveness Factors in Inspection Frameworks

One of the most prominent roles of school effectiveness theory and research is in shaping and formulating school inspection frameworks and providing empirical evidence to indicate which malleable school conditions have the most important influence on education quality. The research offers scientifically-grounded rationales in favour of choosing relevant inputs and processes indicators (Scheerens & Ehren., 2016). Many of the school inspection

frameworks were informed by school effectiveness theory, according to Ehren et al. (2013), who compared school inspection frameworks mainly concerning educational processes from six European countries. Van Bruggen (2010) conducted a comparative study on school inspection frameworks of 18 European inspectorates. This research identified a common set of criteria regarding the organization and administration of the school and the teaching and learning in complex school systems, which represent the national perspectives on quality education. By reviewing the profiles of these 18 countries in Europe, the similarities embedded in school level and classroom level were deduced (see table 2.10). Some school effectiveness factors identified by Scheerens (2009) as promoting school quality are reflected in the inspection framework of each country in terms of the opportunity to learn, learning time, achievement orientation, clear and structured teaching, challenging teaching approach, and orderly learning environment (Ehren et al., 2013). In a broader view, three common dimensions were identified in inspection frameworks of OECD countries, such as compliance with rules and regulations, quality of instruction and student performance (OECD, 2011). Factors verified in school effectiveness models and applied in school inspection framework of European countries and OECD countries are employed to inform this study.

Table 2.10: Key Similarities and differences in School Effectiveness Factors Identified in Three Key Comparative Studies on Inspection Frameworks from EU and OECD Countries

Level	Effective Factors Abstracted from School Effectiveness Models (Scheerens, 1990; Creemers and Kyriakides, 2008)	Effective Factors in Comparative Study on Inspection Frameworks of 18 Countries (Van Bruggen, 2010)	Effective Factors in Comparative Study on Inspection Frameworks of 6 Countries (Ehren, 2013)	Effective Factors in Inspection Frameworks in OECD Countries (OECD, 2011)
School Level	1. Collaboration and interaction between teachers	Coordination among teachers		
	2. School environment	School climate	Orderly learning environment	Safety issues
Classroom Level	3. Opportunity to learn	Enough opportunities for independent or self-governed learning	Opportunity to learn	Quality of instruction
	4. Effective learning time	Efficiency of the school	Learning time	
	5. Structured teaching	The process of learning and teaching	Clear and structured teaching	
	6. Accessibility of learning resources	The curriculum quality		Curriculum
	7 High expectation for all students		High expectations of student achievement	
	8. Reinforcement	Activating students	Challenging teaching approach	
	9. Effective leadership	Leadership		

Note: Source: **Scheerens, J. (1990).** School Effectiveness Research and the Development of Process Indicators of School Functioning. *School Effectiveness and School Improvement, 1*(1), 61-80. **Kyriakides, L., & Creemers, B. P. M. (2008).** Using a multidimensional approach to measure the impact of classroom level factors upon student achievement: A study testing the validity of the dynamic model. *School Effectiveness and School Improvement, 19*, 183–205; **Van Bruggen, J. C. (2010).** *Inspectorates of Education in Europe: Some comparative remarks about their tasks and work*. Paper presented at the Standing International Conference of Inspectorates of Educaiton in Europe (SICI); **Ehren, M. C. M., Altrichter, H., McNamara, G., & O' Hara, J. (2013).** Impact of school inspections on improvement of schools-- describing assumptions on causal mechanisms in six European countries. *Springer Science + Business Media, 25*, 3-43; **OECD. (2011)**. *Education at a Glance: OECD Indicators*.

Most inspectorates prefer to evaluate teachers or teaching quality using school-level conditions and general teaching characteristics, such as factors related to school leadership

and school climate (see table 2.10 above) instead of evaluating classroom-level performance (Scheerens & Ehren., 2016). Table 2.10 provides a comparison of nine factors identified in SER and factors referenced in three key studies of school inspection frameworks.

Factor 1 “collaboration and interaction between teachers” was in line with “coordination among teachers” which was subordinated to "the process of learning and teaching” presented by Van Bruggen (2010).

Factor 2 “school environment” was regarded as the most considerable contributor to school effectiveness, since it plays a key role in students’ learning (Linnakyla et al., 2004). In the dynamic model, "school environment" refers to learning climate of school which could have positive impacts on student achievements (Creemers & Kyriakides, 2010b). However, “orderly school environment” presented in the integrated model where students are required to comply with school discipline (Scheerens, 1990) is associated with “safety issues” that were identified by OECD (2011). Ehren et al. (2013) found that both factors of learning climate and orderly environment contribute to the inspection frameworks of six European countries.

Factor 3 “opportunity to learn” and factor 4 “effective learning time” are two essential components of an effective school which, in the view of Creemers and Kyriakides (2010b), were expected to “make decisions on maximizing the use of teaching time and the learning opportunities offered to their students” (p. 267). Factor 3 and factor 4 were supported by Ehren et al. (2013) and Van Bruggen (2010), both of whom emphasized the importance of “curriculum quality” subordinated to “process of teaching and learning”.

Factor 5 “structured teaching” related to instructional quality” as presented by OECD (2011), was regarded as “structured, direct teaching and a clear goal-directed teaching approach” (Ehren et al., 2013, p. 17) in “the process of learning and teaching” (Van Bruggen, 2010). In alignment with the perspective of Kyriakides and Creemers (2008), “structured teaching” in most cases is related to curriculum quality, opportunity to learn, and learning time with a focus on the quality of textbooks and methods (Ehren et al., 2013). It was also supported by Van Bruggen (2010) who paid attention to the coherence of the curriculum and its alignment over time, since structured teaching can only be realised when a well-structured and high-quality curriculum is developed.

Factor 6 “accessibility of learning resources” referred to obtaining learning resources, such as teaching aids and educational assistance, which could have a positive influence on students’

learning and teachers' professional development (Kyriakides et al., 2010). Scheerens (2000) thought that learning resources were comprised of teaching methods, textbook, and curriculum, among which the quality of the curriculum was identified in Van Bruggen (2010) study.

Factor 7 "high expectation for all students" was acknowledged to be an effective factor that could affect school quality (Bosker & Scheerens, 1994; Sammons, 2007; Scheerens, 1990; Teddlie & Reynolds, 2000), since the core of high expectations lies in achieving the best student outcomes (Ehren et al., 2013).

Factor 8 "reinforcement" was the variable most related to student achievement (Walberg, 1984) because structured teaching requires that students get frequent monitoring and feedback in order to strengthen their motivation for learning (Scheerens, 1990). Although it was not included in the dynamic model, both Ehren et al. (2013) and Van Bruggen (2010) found evidence in European national inspection frameworks which demonstrates its importance in activating and inspiring students' motivation through the cognitive challenge.

Factor 9 "effective leadership" identified in the previous school effectiveness research (Bosker & Scheerens, 1994; Sammons, 2007; Teddlie & Reynolds, 2000) were also indicated in the school inspection framework of 18 European countries (Van Bruggen, 2010).

In summary, Scheerens (2000) identified school effectiveness factors that were found to be the most important in promoting educational quality, especially for industrialized countries. However, these effective-school factors have not been adequately examined in the developing countries (Teodorovic, 2009). Therefore, this research is expected to fill in this gap to some extent by exploring stakeholders' views of the validity and feasibility of effective-school factors in the context of school inspection in a developing country, specifically China. As noted in the introduction chapter, this will contribute original evidence and potentially enrich the existing school effectiveness knowledge base to include countries such as China where little empirical school effectiveness research has been conducted.

2.4 School Inspection Theory

Nowadays, external school inspection has become a prevalent approach to evaluating school quality and strengthening government control in many countries (Eurydice, 2004; MacBeath, 2006). Almost all European countries arrange for an external evaluation of their schools to improve the quality of compulsory education (Eurydice, 2004). More specifically, the recently increased emphasis on school inspection resulted from the government's need to

exert stricter control upon education quality in order to counterbalance the impact of high reliance on school autonomy and self-governance on decreased education quality (Ehren et al., 2013). School inspection, as a mode of evaluation, is similar to supervision, which is defined as a process of collecting and interpreting evidence systematically where a judgement of value with an opinion to action is yielded (Beeby, 1977). Different from supervision, which aims to enhance internal school improvement continuously by monitoring and mentoring the personnel of the educational institute to improve their work performance in a soft and informal way (Nwaokugha & Danladi, 2016), school inspection is often initiated by external inspectorates who aim to balance tensions between "judgement about quality" and "development of quality". The former one emphasises inspectors' summative judgement on education quality made by inspectors, and the latter highlights their recommendations for improvement (Penzer, 2011).

2.4.1 School Inspection Purpose

It has been acknowledged that inspection has two main functions: accountability and improvement in the educational system, while "monitoring for compliance may take place alongside evaluation for accountability and improvement" (Slater, 2013, p. 8). In general, accountability-oriented inspection tends to be more judgmental and controlling and bears a close relationship to the administrative hierarchy or an important external organization on which the school may rely (Scheerens et al., 2003, p. 30). This means that as collective entities, schools are accountable to the senior level in the educational system (O' Day, 2002), which represents one form of policy of administrative or bureaucratic accountability (Aadams & Kirst, 1999). The school inspection system, on one hand, requires school education quality to meet the minimum level; on the other hand, it plays an active role in encouraging schools to comply with the legal requirements (De Wolf & Janssens, 2007). Furthermore, OECD countries have increasingly applied the evaluation tool for accountability purposes in various forms: first, these countries tend to publish student evaluation results, school inspection reports, and school annual reports for an audience of parents, government agencies, and the media; second, the schools are supposed to receive rewards or punishment based on their good or poor performance (Clark & Ozga., 2011; OECD, 2013a). For instance, the United Kingdom and the Netherlands focus on the roles of school inspection in public accountability. "School inspection thus leverages pressure onto a school to improve its quality in order to acquire clients, thus triggering the schools to enter into competition" (Dedering & Muller, 2011, p. 307).

However, in the federal states of Germany, the quality of development and improvement is the priority of school inspection in that “there is no increased competition among schools while the school inspection provides the schools with information to optimize their governance processes which they previously lacked” (Dedering & Muller, 2011, p. 307). Similarly, Hong Kong employs Territory-wide System Assessments as part of the accountability mechanism, but this mechanism seeks to inform policy and school improvement rather than make comparisons between schools (Education and Manpower Bureau, 2006; Law, 2007). Thus, in addition to the purpose of traditional accountability, school inspection might potentially serve the purposes of “gaining knowledge”, “school development”, and “enforcing standards” (Landwehr, 2011). The educational inspectorates who strive to back up and supervise school improvement tend to pay more attention to the schooling process and the school’s outcomes (Scheerens & Ehren., 2016). Thus, if inspection is designed for the purpose of improvement, the traits and standards of the inspection should correspond to its intended objectives in improving teaching, learning, and student outcomes (Scheerens & Ehren., 2016) before starting to diagnose the barriers for school improvement (Ehren & Honingh, 2011). The evidence can be found in the broad consensus in comparative research regarding inspection frameworks of different countries which emphasise processes, outcomes, and compliance with regulations. Ehren et al. (2015) compared inspection frameworks formulated by the educational inspectorates of six countries (the Netherlands, England, Sweden, Ireland, Austria and the Czech Republic) and found that they commonly focused on monitoring the school's compliance with regulations, principles, and practices of good education, and school outcomes for student achievement in core subjects. Likewise, "compliance with rules and regulations" is also the most common area reported by OECD countries (OECD, 2011).

2.4.2 School Inspection Content

The criteria (e.g. processes of teaching and learning) and standards (e.g. excellent, inadequate) are employed to make a judgement on the quality of education. This study focuses more on criteria which are indicators related directly to the selected definitions and concepts of education quality employed to supply an ultimate evaluative interpretation of school quality (Scheerens et al., 2003). The inspectorates cannot completely play their roles without being responsive and accountable and getting other parties involved in the development and adaptation of their own definition of quality (Dobart, 2001). Hence, setting the priorities and selecting criteria and standards at the initial stage of inspection for an evaluator is practically important (Scheerens et al., 2003). In national inspection systems, criteria and standards are

set in advance by policymakers/regulations. This study intends to explore stakeholders' views on difference inspection 'criteria' which give a precise explanation of each dimension or indicator to evaluate education quality. Therefore, the relevant conception and theoretical frameworks of education quality set the foundation for reviewing and shaping which criteria are considered important to inform the design of survey instruments employed in this study. To facilitate this task, the content of inspections is critiqued and mapped in the sections below based on the pre-set concept of education quality, including outcome, process, and equity.

2.4.2.1 Inspection Criteria in 'Outcomes'

According to Ehren et al. (2015), for the inspectorates of education, outcome evaluation has a greater impact on schools than evaluating either processes or compliance with legislation alone. Educational effectiveness theory highlights student outcomes as the key measures of educational quality and often regards outcomes as equivalent to academic achievement, since academic achievement can be easily obtained through standardised assessment in comparison with other more complicated and less tangible outcomes (UNICEF, 2000). This goes in accordance with the accountability system which relies heavily on large-scale assessments in the USA (Ryan et al., 2013). However, mere scores in cognitive subjects are not capable of constructing a comprehensive and dynamic view of education outcomes (Dijkstra, Geijsel, et al., 2014). It has been increasingly acknowledged that evaluation of students' learning outcomes should extend beyond subject knowledge and skills in some designated areas and include broader learning outcomes, such as attitudes, critical thinking abilities, social competencies, and overall well-being as some of the most recognised outcomes from among inspection frameworks of European and OECD countries (OECD, 2013a; Van Bruggen, 2010). Furthermore, in another recent study, a number of education inspectorates (e.g. in Norway, the Netherlands, Scotland) involved standards of social outcomes in their inspection frameworks in order to provide a broader picture of school outcomes (Scheerens & Ehren., 2016). Ehren and Dijkstra (2014) defined social outcome as "the individual and collective benefits of education for interpersonal interaction in the noneconomic spheres of life" (p. 51). At the school level, social outcomes concern social competencies for people to realize their goals and live with others in some situations, as well as civic competencies which enable students to contribute to society and their social network (Scheerens & Ehren., 2016). In contrast to the cognitive outcomes, social competencies are developed in real life and can be measured through daily observations (Dijkstra, Dela Motte, et al., 2014). In this case, it has been argued that more effective instruments should be developed in order to meet the

demands to evaluate students all-round development in a broader range of academic and social areas (Gray et al., 1996).

2.4.2.2 Inspection Criteria in 'Process'

The factors embedded in the schooling process are typically the predominant influence on education quality in that both teachers and administrators are making efforts to improve students' learning experience by enhancing teachers' professional development and teaching practices and providing administrative support to facilitate classroom teaching (UNICEF, 2000). According to the perspective of school effectiveness, effective schooling itself should be regarded as a dynamic and ongoing process (Kyriakides, 2012), where effective school-level conditions are "expected to contribute to and facilitate effective teaching and instruction and lead to higher students' achievement". These school-level conditions related to school organisation and management, include "educational leadership, a productive climate, and achievement-oriented school policy" (Ehren et al., 2013, p. 25). Thus, the school-based factors presented in interactions with different schooling processes might be more convincing than those status factors alone, such as size or property of schools, in affecting students' outcomes (Bloom, 1976). Therefore, it is not surprising that "the organisation and management of the school" and "teaching and learning" are frequently included in inspection systems (Van Bruggen, 2010). Similarly, in reviewing inspection framework of OECD countries, the common areas of inspection criteria include "compliance with rules and regulations, quality of instruction and student performance" (Perry, 2013), among which quality of instruction and student performance go in accordance with "teaching and learning". From this, we can extract three key dimensions concerning the schooling processes, including the organisation and management of the school, the quality of teaching, and the quality of students' learning.

2.4.2.3 Inspection Criteria in 'Equity'

Equity is the preliminary aspect for evaluating education quality when analysing equal or "fair" distribution of inputs, processes, and outcomes among participants with different characteristics (Scheerens et al., 2005). In other words, personal characteristics or social circumstance factors, such as gender, ethnic or family background, should not be seen as a hindrance for pupils to obtain high educational achievement (with a focus on "equal access to education"); and all learners are required to reach a basic minimum standard of education (with an emphasis on "high quality") (OECD, 2012). In practice, control and assurance are often delivered as "access to education" in compliance with regulations and laws for the purpose of accountability (Slater, 2013). Given the general consensus that the process factors are more powerful than input factors to explain differences in school quality (Scheerens &

Ehren., 2016), process variables in this research are potentially considered to also have more impact on improving educational equity. In addition to offering equal opportunities to access high-quality education, many European and OECD countries agreed on the significance of recognising and meeting different learning needs of different students' groups in order to promote accomplished education outcomes for all students (Faubert, 2012; OECD, 2015; Van Bruggen, 2010).

In summary, as this research is centred on investigating school inspection approaches as a means to evaluate education quality, this is described in relation to three key concepts of education quality (process, outcome, and equity) and the designed theoretical framework is mapped based on these three core concepts of this study. The "process" is comprised of two dimensions of "organization and management" and "teaching and learning" at the school level and the classroom level which are underpinned by educational effectiveness theory. "Outcome" reflected in "school outcome" includes both academic outcomes and social outcomes. In order to realise "equity", "equal access to education" as a compulsory regulation for all schools and school-aged pupils is ensured by "compliance with legal regulations", and students' different learning needs can be accommodated by either "school organisation and management" or "teaching and learning" in the schooling process. In conclusion, this theoretical framework is formulated by four dimensions with several sub-categories under each dimension:

Table 2.11: Summarized Key Factors Identified in School Inspection Frameworks Influencing Education Quality

1. Compliance with legal regulations	1.1 Equal access to education
2. Organisation and management in the school	2.1 Educational leadership
	2.2 School climate
	2.3 Achievement-oriented school policy
3. Teaching and learning	3.1 The quality of teaching
	3.2 The quality of students' learning
4. Students' outcome	4.1 Academic achievement
	4.2 Social outcomes: • Attitudes • Critical thinking abilities • Social competencies • Civic competencies • Overall well-being

In addition to the effectiveness factors emerging from the theories related to education quality reviewed above, survey items regarding headteacher leadership, classroom teaching, teachers' professional development, student learning, and outcomes that originated from previous questionnaires were employed to inform the survey instrument in this research. The questionnaires titled *Teaching and Learning International Survey (TALIS)* (OECD, 2013b), *Teachers' Views on Evaluating Quality in Education (TVEQE)* (European Science Foundation, 2008), and *Improving teacher development and educational quality in China*

(ITDEQC) (Thomas, 2014) have been employed to query headteachers, teachers, and students from EU and OECD countries and China regarding their perspectives on education quality in the schooling process. As the surveys above included a broad range of items concerning education practice which have been piloted in both international and Chinese contexts, they may possess known reliability and validity. Additionally, due to the limited empirical research on school effectiveness that has been conducted in Chinese context, the items from *TALIS, TVEQE, and ITDEQC* were employed to complement the survey items which originated from international literature to inform the survey instrument in this research (see Appendix I and II).

2.4.3 School Inspection Approach/Procedure and Consequence

Regarding school inspections, values with respect to what a good school/bad school and what good/bad teaching constitutes are shown in both what is inspected and how the inspections are implemented (Ehren et al., 2015). Thus, it is important to consider both the approaches used to collect data about education quality and the quality of inspection (Scheerens et al., 2003). Ehren et al. (2013)'s study examines different methods and models of inspections used by different European education inspectorates to promote the education system as a whole. Generally, within different models, various evaluation methods are employed to collect information, including desk research, school visits, interviews, questionnaires, classroom observation, and analysis of documents provided by the school, such as school self-evaluation reports. Klerks (2012)'s literature review on inspection characteristics found that school inspection promotes school improvement through a complex interaction between the characteristics of the school inspection and the school management, teachers, and students, but this improvement does not merely depend on one specific characteristic of school inspection. Specifically, inspection standards intend to impact the actions of schools, especially when schools fail to meet these standards and thresholds. Then inspectors leave feedback which is related to standards, along with sanctions/rewards to support and motivate school improvement (Ehren et al., 2013).

Most studies in European countries revealed that school inspection could bring about positive and unintended consequences for school improvement, teachers' teaching practices, and students outcomes (Nelson & Ehren, 2014). However, in the context of low-and-middle-income countries, the lack of the essential support provided by resources and materials might set barriers on school visits and publication of inspection reports, as well as collecting and analysing school documents, throughout the process of implementing school inspection (De Grauwe, 2001; Herselman & D, 2002; Macpherson, 2011). The contextual differences in the

developed countries and developing countries make it hard to generalise and transfer the findings related to the consequences of school inspection in the developed countries to the developing world (Ehren et al., 2017). More importantly, existing research on the quality of school inspection processes is limited for the context of the developing countries (Ehren et al., 2017) and similarly limited for the Chinese context. This research also intends to address this gap by investigating both intended and unintended consequences brought by the critical procedures of school inspection for quality improvement in the context of the China. According to Ehren et al. (2013), four main aspects of school inspection play dominant roles in improving school quality, including the type/frequency of schools inspections, the criteria and thresholds used to evaluate school quality, the feedback provided during school visits, and the sanctions and rewards used for school improvement.

2.4.3.1 Frequency

From Whitby's (2010) sample of national contexts, the external inspections are carried on most frequently (every three years) in England and New Zealand, and least frequently (every five years) in Singapore. Ehren et al. (2013)'s research findings indicate that cyclical school inspections are used by all systems. According to Whitby (2010), school visits will be arranged as 'proportional to the need' when self-evaluation documentation has been submitted to the external inspectorate. This means that when poor school quality is suspected, an inspection will be scheduled, and the school will be visited more frequently and offering different inspection resources (Ehren et al., 2015; Ryan et al., 2013). In contrast, well-functioning schools are visited less regularly in an attempt to continuously align their self-evaluations and daily practices with inspection standards (Ehren et al., 2015). Moreover, Morrison (2009) claimed that the combination of a long cycle and private reporting could lead to schools to be welcoming towards inspectors, rather than resisting them. However, there were few incentives which served to improve the effects and functioning of the school inspection system, with the only indicator of school inspection quality being how frequently the schools were visited, rather than any more direct evaluation of the inspectors' work (Ehren et al., 2017; Uwazi., 2009). In other words, a systematic evaluation mechanism is needed to ensure the quality of school inspection or inspectors' work effectiveness.

2.4.3.2 Standards and threshold

In addition to criteria, organizations also seek legitimacy from the environment for what they do, which in turn strengthens their opportunities for obtaining resources. Thus, standards play an active role in the development of regulations and instruments as they instigate normative pressures (Meyer & Rowan, 2006). Normative pressure is created when the socially-

recognized definition of quality is presented in inspection standards (Ehren et al., 2015). Due to legal nature of inspection standards, these standards implemented through the accountability system are designed to influence movements of schools in that schools are required to reach the expectation of good education as described in standards and procedures to avoid receiving sanctions from the education inspectorates (Ehren et al., 2013). Inspectors' expectation of what constitutes a good school is likely to have a positive influence on school improvement. However, in the face of flawed measures and rigid standards, overemphasising the observance of inspection standards might give rise to undesirable effects which results from school and teachers' strategic behaviour in response to the assessing preferences of inspectors (Ehren et al., 2015; Perryman, 2006).

Specifically, De Wolf and Janssens (2007) defined intended strategic behaviour as performativity and categorized it into window dressing, fraud, gaming, and misrepresentation. Window dressing refers to schools carrying on some measures and procedures regardless of the impact on primary processes but purposefully catering to inspectorates in order to receive a more positive assessment. Window dressing could be realised by applying some purposeful methods, such as fraud, gaming, and misrepresentation. Fraud takes place when records or numbers used by accountability systems to evaluate school processes and outcomes are tampered with in order to reach inspection standards. For instance, Ehren (2006) found that in Dutch schools, students' playing time after class was added into teaching time so as to comply with legislation about the minimum number of teaching hours in legal standards of inspection framework. The second intended strategic behaviour, called gaming, involves manipulating actual schooling process behaviour. Chapman (2001b) figured out that teachers prepared and structured their lectures better during the period of inspection visits in order to reach process standards. Finally, misrepresentation focuses on manipulating behaviour that schools have to show to inspectorates. For example, students who have poor performance could be excluded from exams that are used to evaluate school quality so that average scores might not be lowered by those low-performing students and so the school could reach outcome standards (Nelson & Ehren, 2014).

This intended strategic behaviour has no doubt yielded unintended effects on evaluating genuine school circumstances and inspection quality and leads the school to diverge from preliminary educational goals. Unintended strategic behaviour refers to unexpected influence yielded from inspectors or improper working methods used in evaluating schools. Specifically, schools are likely to put more emphasis on "elements to be assessed" in the performance measurement scheme at the expense of unquantifiable aspects of performance

(tunnel vision), such as long-term and underlying goals and innovation (Nelson & Ehren, 2014, p. 7). These behaviours might negatively influence pupils' outcomes in school, since Rosenthal (2004) revealed that there was a decrease in students' performance in England in the year of the inspection visits. He attributed this result to extensive preparation for school visits which could take up extensive amount of time and distract teachers and principals from teaching and learning.

2.4.3.3 School Self-evaluation

Self-evaluation results, as a relevant source of information for inspectorates of education to make a judgment regarding the quality of the school, serve the guidance for inspection visits and target potentially weak areas to facilitate school development at the local level (Ehren et al., 2013). Self-evaluation is deemed by most countries as "an ongoing and inclusive process" with more focus on school autonomy that is driven by a developmental impulse (McCrone et al., 2009). In this way, self-evaluation with a formative focus could complement the external school inspection that is both formative and summative in nature (Whitby, 2010). The Ofsted (the office for standards in education, children's services and skills) in England has been spurred on to "ensure that its own inspection processes are flexible enough to accommodate and give appropriate weight to alternative forms of evidence of self-evaluation" (CSF Committee, 2010, p. 59). The evidence suggests that a successful and sustained combination of self-evaluation and external inspection could have a positive influence on school improvement. More specifically, external inspection may prevent self-evaluation from causing self-delusion (SICI, 2005); conversely, it will be unlikely for external inspection to realise school improvement without the provision of support for change provided by self-evaluation (Whitby, 2010). However, an unintended potential risk is that schools are led to adopt the strategic behaviour of measure fixation in order to reach inspection standards in self-evaluation scores but ignore their role in realising underlying objectives of quality improvement (Nelson & Ehren, 2014; SICI, 2005).

2.4.3.4 Observation

Non-participant observation is adopted in some cases by inspectors to evaluate and directly rate observed practices from inspected classroom teaching, laboratory sessions, meeting etc. against pre-set criteria (Wilcox, 2000). However, any judgement made based on the lesson observed could not be applied beyond the period of inspection since it is very difficult to understand the school characteristics as a whole based simply on the judgements from a particular period when schools are inspected (Wilcox, 2000). In this case, inspectors often

need to seek other evidence from the related school documents and surveys to support the previous judgements made based on observation.

2.4.3.5 Survey

In order to collect evidence to verify whether schools satisfy inspection criteria or not, discussions with key stakeholders often aims to gain "greater insight into the overall complexity of matters by observing schools from several perspectives" (Eurydice, 2004, p. 3). The Danish Evaluation Institute also asserted that involving stakeholders in the work of evaluation agents is beneficial for the process of evaluation, the effects, and the utilisation of the evaluation reports (Institute., 2003). Inspectors tend to collect evidence through discussion with teachers and other staff who work in the school. For instance, inspectors often adopt a group interview method when larger numbers including teachers, pupils, and parents are brought together to talk about one particular theme. However, the dynamic situation of a group interview makes it more difficult than individual interviews to keep the discussion on track and to encourage participation (Wilcox, 2000). Questionnaires are often employed because they can be completed easily and quickly, and the results can be analysed rapidly so as to generate evidence in time.

2.4.3.6 Feedback

Feedback is usually offered to principals or teachers in the entire school during a meeting at the end of inspection visits, and in follow-up report which would give recommendations to schools on how to improve or demonstrate some examples of good practice in other schools (Ehren et al., 2013). In any case, education inspectorates assume that schools will reflect on the feedback, modify existing process for school improvement based on this feedback, and put forward strategies in practice, thereby improving school quality (Ehren et al., 2015).

Numerous research studies have also found that feedback has a great impact on school improvement (Ehren & Visscher, 2008; Matthews & Sammons, 2005; McCrone et al., 2009) because feedback presents some ideas for improvement and develops appropriate strategies to close the gap between performance and standards (Coe, 2002). Evaluative feedback is often seen as an "unspecific impulse" for improvement and not a roadmap for innovation (Ehren et al., 2015, p. 384). That is because inspection feedback does not provide specific cues with detailed guidance on how to improve and develop in schooling processes, but it is likely to offer comparative information with regard to the rank of each school in relation to the self-esteem of individuals and organizations (Ehren et al., 2015). Thus, feedback will not promote improvement on its own; however, according to Ehren and Visscher (2008) who claimed that in operational models where feedback consists of unsatisfactory marks, suggestions for

school improvement in detail and agreements on improvement do indeed influence school inspection and its effect on school improvement.

The quality of feedback is called upon to guarantee the quality of inspection and motivate school improvement. However, not all types of feedback are useful for schools (Hattie & Timperley, 2007). Research with respect to the effects of feedback on student outcomes indicates that it is very difficult for many schools to take a proper action in response to inspection feedback (Altrichter, 2010). Schildkamp and Visscher (2010b) demonstrated that individual feedback for teachers and advice which fits with the school's culture is helpful to improve the quality of the school. Furthermore, Ouston et al. (1997) pointed out that if the inspection report uses detailed description to indicate the areas where school performed poorly, the feedback will better promote school improvement. In conclusion, feedback which is pertinent, comprehensible, clearly defined, constructive, precise and useful could actually lead to improvement (Doolaard & Karstanje, 2001). This requires that the content, format, and communication of feedback be designed carefully and fitting for the local contexts in order to enable teachers and schools to build up their capacity for making use of feedback to improve school quality (De Grauwe, 2008; Ehren et al., 2015). Thus, the content of feedback might be an important factor that would limit school improvement in low-and-middle-income countries where school inspection was merely focused on bureaucratic and administrative issues by examining figures and compliance with regulations regardless of the vital issues related to school improvement (Chen, 2011; Darvas & Balwanz., 2014).

2.4.3.7 Publishing School Performance Data

A number of major inspectorates publish their inspection findings for the public, including the Netherlands, England, Scotland, and New Zealand, among others (Whitby, 2010), but not including Singapore and Macau (Morrison, 2009; Tan, 2013). These public reports are anticipated to promote school accountability but also improvement through informed school choice and the perceptions of parents (Ehren et al., 2005). Also, the functioning of the school with regards to the inspection standards is depicted and the areas to be improved are identified, along with a list of failing schools and tables with school performance summaries (Ehren et al., 2013). The idea of publicising the school performance data, on one hand, could improve the quality of school performance (De Wolf & Janssens, 2007; Meijer, 2007) because headteachers are supported in putting forward changes to the school. This is reinforced by media attention to the quality of schools and the competition between schools (Janssens, 2011). On the other hand, it could add to the process of public accountability by achieving more transparency of outcomes in implementing educational policy (Meijer, 2007).

Additionally, inter-school performance could be compared using the same benchmark through the publication of school information. In this way, high-performing schools could be distinguished from those low-performing schools which might be at risk of being improved or being closed (especially in the Netherlands, England, Chile, Hungary, etc.) (OECD, 2013a). However, placing too much weight on school performance data sacrifices what is taught in schools; as a result of this, the 2019 focus for school inspection framework in England will be shifted back to the substance of learning and teaching. In this way, learners are expected to access a broader range of subjects and teachers will be more focused on teaching rather than spending too much time on preparing for tests (Ofsted, 2018).

2.4.3.8 Sanctions and Rewards

As a consequence of school inspection, failing schools might face sanctions or interventions (Van Bruggen, 2010). School inspectors could strengthen monitoring these failing schools by increasing the frequency of school visits to address the weaknesses and help to implement an improvement plan. Schools are also likely to receive financial bonuses or awards in recognition of their high performance (Ehren et al., 2013).

A number of studies have uncovered the positive impact of sanctions and rewards on improving education quality in the schools. Nichols et al. (2006), Elmore and Fuhrman (2001) and Malen (1999) indicated that schools strove to perform well when they lost or gained something valuable; it was not sufficient to motivate schools to reach high standards by merely providing information and feedback. Giving formal sanctions to continuously low performing schools, such as forced reconstitution, is probably more useful to stimulate responses than grading schools and reporting results in public, which could only lead to "informal embarrassment" (Ehren et al., 2013). Ofsted also endorses the power of incentives by which schools are judged as 'outstanding' based on inspection standards; this allows schools to apply for benefits or special status (Ehren et al., 2013). However, sanctions and rewards might discourage intended behaviour or trigger undesirable behaviour.

Kerr (1975) argued that organizations tend to put more emphasis on activities which are rewarded but ignore activities which are not rewarded, which occurs depending on the perceived attractiveness of the rewards provided. Thus, schools may suffer from "ossification"; for instance, teachers and principals choose to promote teaching and learning with a focus on some subjects which are centrally approved in inspection framework (Nelson & Ehren, 2014). Similarly, Elmore and Fuhrman (2001) state that schools in the face of severe sanctions like reconstitution and probation do not appear to make fundamental

improvements in their core processes. Instead, they might attach more importance to elements of the schooling process which are assessed through school inspection. These actions, while possibly addressing current measures and leading to rapid improvement, are potentially unhelpful in the long run as they fail to realise underlying targets for improving school quality (Brimblecombe et al., 1996; Chapman, 2001a).

In addition to the school inspection theories reviewed above, the questionnaires employed in Ehren et al. (2014)'s EU life learning project "Impact of School Inspections on Teaching and Learning" were also used to inform the survey instrument in this research. A broad variety of educational inspectorates were involved in this project, since they adopted different school inspection approaches ranging from low-stakes approach carried out on a regular basis without punishment and rewards (e.g. Ireland and Sweden) to the directive and focused medium/high stakes early warning analysis and customised inspections (e.g. the UK and the Netherlands). Although this subject was conducted in the context of European countries, which are different from the Chinese context, the survey items regarding a broad range of inspection methods piloted in this project with known reliability and validity can be amended to accommodate the local context. Additionally, the school inspection system in China is still developing and remains to be further completed and improved, and very limited empirical research has focused on the impact of school inspection on education quality. Thus, the items used in the survey of Ehren et al. (2014)'s project were employed to complement the survey items which originated from international literature to inform the survey instrument in this research (see source of survey questions in Appendix I and II).

2.5 International Conceptual Framework

Drawing together the evidence critiqued in previous sections of this chapter, and reviewing previous international theories of education quality, school effectiveness, and school inspection, a conceptual framework has been developed (see table 2.11) to summarise the key findings. The key factors identified in theoretical frameworks of education quality, school effectiveness factors, and inspection indicators applied in EU and OECD countries have been mapped against the basic concept of education quality in terms of the outcome, process, and equity. As a result, these key factors are synthesized into dimension "School Inspection Content". The key purposes and procedures of school inspection employed by the educational inspectorates in OECD and EU countries are categorised into dimension "School Inspection Purpose" and dimension "School Inspection Approach/Procedure". The key positive and unintended consequences brought by school inspection for school improvement, teachers'

teaching practices, and student outcomes demonstrated in previous studies in European contexts are summarised in dimension "Positive/unintended Consequences of School Inspection". This international conceptual framework of school inspection system is used to inform the research design and the design of research instruments in the current study.

Table 2.12: A Conceptual Framework of School Inspection Synthesising International Literature

1. School Inspection Purpose	1.1 Accountability 1.2 Compliance with legal regulations 1.3 Improvement 1.4 School development 1.5 Education quality
2. School Inspection Content	**2.1 Compliance with legal regulations** 2.1.1 The obligations of provision of education-access and quality
	2.2 Organisation and management in the school 2.2.1 School environment • Positive climate • Environment safety • Inclusive environments • Effective school discipline policies • Non-violence 2.2.2 Achievement-oriented school policy • Administrative support and leadership • Collaboration and interaction between teachers • Families and communities are engaged in education • Reliable assessment
	2.3 Teaching and learning 2.3.1 The quality of teaching • Opportunity to learn • Curriculum quality • Effective learning time • Structured teaching • Teach to the level of students • Teacher-learner relationship • High expectation on all students • Teachers beliefs that all students can learn • Using new technologies to facilitate teaching • Active, standard-based participation methods • Continuing support for student-centred learning 2.3.2 The quality of students' learning • Accessibility to learning resources • Reinforcement 2.3.3 Teachers' Development • Teacher competence and school efficiency • Ongoing professional development • Motivation
	2.4. Students' outcome 2.4.1 Academic achievement • literacy and numeracy, core subject knowledge 2.4.2 Social outcomes • Attitudes/Values : solidarity, non-violence • Critical thinking abilities • Social competencies: relationship skills/communication • Civic competencies • Overall well-being • Health outcomes • Skills to frame and solve problems • Dignity and self-esteem • Self-awareness • Sense of self-discipline
3. School Inspection Approach/Procedure	3.1 School self-evaluation 3.2 Frequency 3.3 Document inspection 3.4 Observation 3.5 Survey 3.6 Feedback 3.7 Publication of school performance data 3.8 Comparison of school performance 3.9 Rewards/Sanctions

4. Positive/unintended Consequences of School Inspection	4.1 School self-evaluation 4.1.1 Fraud 4.2 Feedback 4.2.1 Quality of feedback affect school improvement 4.3 Standards/thresholder 4.3.1 Window dressing 4.3.2 Fraud, gaming 4.3.3 Misrepresentation 4.4 Rewards/Sanctions 4.4.1 Promote school improvement 4.4.2 Intend to satisfy the preference of inspectorates

2.6 Chapter Conclusion

This chapter has discussed the basic concepts of education quality with an explicit focus on "outcome", "process", and "equity". Based on these three key components of education quality, related frameworks of education quality were compared and analysed to identify common factors indicated in the frameworks underpinning the basic concept. In reviewing school effectiveness models, school-level factors regarding school management and leadership facilitate classroom-level factors related to classroom teaching and students' learning. School-level and classroom-level factors combine to affect student outcomes in alignment with the common characteristics of effective schools embedded in the schooling process contributing to the overall school quality. In practice, the school inspection documents formulated in various contexts of EU countries and OECD countries validated the effective factors recognised in school effectiveness theories so as to provide detailed subordinated criteria to enrich the concept of education quality. School inspection frameworks applied in various contexts were also mapped on the conceptual framework of this research. In the aspect of "outcome", multiple types of outcomes, including social outcome with a focus on students' learning and thinking abilities and communication skills were evaluated by other countries in addition to the academic performance. Teaching and learning at the classroom level, as well as organisation and management at the school level were emphasised in the "process" by almost all the inspection documents. In order to ensure "equity", compliance with legal regulations was supported by most countries. Different from equity in terms of input or access to education, equity in the schooling process was prominent.

In addition to the content of school inspection standards, procedures applied in the process of school inspection were also reviewed and four procedures of school inspection (involving the type/frequency of school inspection, the standards/thresholds used to evaluate school quality, feedback provided during school visits, sanctions/rewards used for school improvement) that could influence schools on improving their performance in different ways were identified. However, a large amount of research also reveals that inspections' unintended consequences

in the form of strategic behaviours and overlooking the overall education goals brought by school inspection might affect the functioning and quality of school inspection.

Finally, a comprehensive conceptual framework informed by previous literature regarding education quality theories and school inspection practice has been synthesised to underpin the following survey instrument construction and empirical data analysis. This framework is outlined and categorised into four dimensions: school inspection purpose, criteria, procedure/approach, and positive/unintended consequences of school inspection. Key factors derived from school effectiveness theory have mostly been examined in developed countries but rarely explored in developing countries such as China. Additionally, the literature gap in empirical evidence on the consequences of school inspection system in developing countries was attributed to the difficulty in directly transferring the findings of developed countries to developing countries, due to their prominent contextual differences. Thus, a gap exists in the literature in regard to the degree of importance for each inspection indicator and procedure used in the process of school inspection. This weakness has been identified in previous research and will be addressed in the following empirical study in order to contribute to recommendations to demonstrate and improve education quality in China.

Through reviewing related literature and theories of the evaluation system of education quality around the world, the research background that illustrates the main focuses of education quality, approaches to measuring education quality, and consequences caused by school inspection lay a foundation for exploring these research issues in the context of China. In the following chapter, the social-economic and policy context underlying the education and inspection system of China and Shandong province will be introduced.

Chapter 3 Research Context

3.1 Introduction

This chapter introduces the history and development of the compulsory education system and school inspection system in China. It also provides the rationale and the specific context of Shandong province and Q city where the study takes place. The chapter begins with basic information regarding the status of the compulsory education system in China, based on which the potential and emerging issues will be identified in the following sections. The second section presents the social-economic context which underpins education reforms and shapes the relationship between the central government, local departments, and schools. The same section also briefly introduces the series of educational innovations that the Ministry of Education (MOE) in China launched since the 1990s to enhance various aspects of education quality, such as students' learning outcomes, classroom teaching, leadership, teachers' professional development, school management and educational equity in the schooling process. The last section discusses the development and organisational reform of the school inspection system and critiques the extent to which school inspection improves the development of education quality in a balanced way and across different regions. The national school inspection framework was formulated to promote accountability, improvement, and compliance with legal regulations by providing guidance for formulating provincial school inspection frameworks and implementation schedules. Through comparing the school inspection framework of Shandong province to the international and local literature, inconsistencies in their approaches to inspection indicators were identified, although the procedures used in school inspection were similar. Additionally, the rather limited empirical research on the impact of school inspection on education quality in the Chinese context is reported. Thus, the chapter concludes by proposing the current research inquiry concerning participants' perceptions of the importance of each inspection indicator and procedure for demonstrating and improving education quality and of the strengths and weaknesses in the process of school inspection in China.

3.2 A Brief Introduction of the Compulsory Education System in China

At the beginning of 2017, the State Council (the Central Government, SC) issued *The 13th Five-Year Plan of National Education Development* (FYPNED) stating that "Universal Nine-year Compulsory Education" had been realised all over the country and compulsory education had oriented towards balanced development (SC, 2017). On June 29, 2006, the

amended *Compulsory Education Law of the People's Republic of China* (CELPRC) stipulated that "all children and adolescents who own the nationality of the People's Republic of China and have reached the school age (aged six, not above seven) shall have equal right and obligation to receive free compulsory education, regardless of gender, race, status of family property or religious belief, etc." (National People's Congress, 2006). In this research, "compulsory education" refers to primary school education for 6-11 year-old students and junior middle school education for 12-14 year-old students (Liu & Teddlie, 2003). In 2017, there were 100.93 million students enrolled in 167,000 primary schools (aged from 6 to 11) and 44.42 million students in 51,900 junior high schools (aged from 12 to 14) (The MOE, 2018). The government claims that development across different regions is getting more balanced (SC, 2017), as the gap in school investment between the urban and rural area is being reduced (Zhu et al., 2017). It can be attributed to the fact that in 2011, the state financial investment in education reached 4% of GDP. Since then, the quality of teachers and the teaching facilities in rural schools have been substantially improved (The MOE, 2017). More than 93.7% of primary school teachers have achieved a college degree or above, and 82.5% of junior high school teachers had a bachelor's degree. Over 98% of junior high schools can access the internet (The MOE, 2018). All the educational achievements mentioned above can be attributed to the continuous reforms in the education system undertaken since the early 1980s at the national level in China to accommodate social and economic development (OECD, 2016).

3.3 Reform of Educational System in China

3.3.1 Fiscal and Administrative Decentralisation

Like many other developing countries, the education reform in China has been influenced by globalization, economic development, and modernization (Liu, 2005). In order to adapt to the global trend of educational decentralisation and school autonomy, both developed and developing Asian countries, such as China, Indonesia, Japan, and Korea, started educational decentralisation to improve public schools (Bjork, 2007). According to Huang and Wiseman (2011), educational governance had been the most emphasised area in educational policy research in China since 1978. Its most crucial aspects lay in the efficient use of resources promoted by decentralization and marketization (Hannum et al., 2008).

Administered by the SC, the Ministry of Education as the highest educational organisation has responsibilities for making educational policies, selecting textbooks, supplying curriculum outlines, and running university entrance exam (Zhou, 2017). Educational reform

in China began with fiscal and administrative decentralisation, through which power was authorised to the subordinate provincial governments who shared the responsibility for developing basic education. Overall, in urban areas, compulsory education including primary school and junior high school are sponsored and managed by provincial and city authorities; in rural areas, compulsory education is co-sponsored by the county-township and village-authority and are co-managed by the county-and-township authority (Zhao & Qiu, 2012). The responsibility consisted of managing education funding, deploying and managing school headteachers and teachers, and formulating guidelines of education and instruction for primary and secondary schools (Zhao & Qiu, 2012). In the view of Bjork (2007), this series of reform measures also strengthened the autonomy of schools, though the MOE still possesses the power to make key decisions. The transference of power from central to local authorities means that the central government only provided local schools with some subsidies, while local (province/city) governments must find alternative and additional funding to support local basic education and address the gaps in funding. Public primary and secondary schools, as non-profit institutions, are fully funded by the local government to provide free compulsory education for all school-age pupils (Law, 2002). However, fiscal decentralization was complex in that the effects of implementation rely heavily on the economic context (Tao & Zou, 1998). Decentralization would probably work well in some developed regions, but some developing regions needed more financial support from senior authorities or the central government. This can be conceived as recentralization (Cheng, 1994). Generally, one system is always a combination of centralization and decentralization, and there is no complete decentralization (Bray, 1999; Hanson, 1998). This initial reform started with the implementation of a general policy in 1985 that introduced the process of decentralization but ambiguously described the central government's role as "monitoring" (Hawkins, 2000).

In 1993, the SC published the *Program for China's Education Reform and Development* (SEC, 1994), which clarified the provincial authorities' power for stipulating rules and regulations regarding the management and financial oversight of basic education (Cui, 1993; Hawkins, 2000). In 1999, educational decentralization was strengthened in that local governments were still mainly responsible for basic education, and the local county-level governments were empowered to manage educational financing, teachers and staff, and recruit and dismiss principals (Xia et al., 2017). In July 2010, the *National Outline for Medium and Long-term Education Reform and Development (2010-2020) ("the Outline" for short)* was issued with a particular emphasis on extending schools' autonomy. The outline

initially delegated more power to provincial governments to formulate provincial educational development plans (Gu, 2010). Recently, in November 2013, the Central Committee of the Communist Party of China (CCCPC) announced the decision to enhance comprehensive educational reform in order to separate the government's power of administration from school management and evaluation. Apart from provincial governments' authorization to draw up educational development plans, schools were granted more decision-making autonomy for internal school affairs and improving the structure of school system (CCCPC, 2013).

3.3.2 Educational Reforms Concerning Education Quality

The 13th FYPNED in 2017 announced that improving educational quality would probably become the core mission in the new educational reform of China within the next five years:

> "Fully implement government policies related to education, deepen the reform of education, focus on improving education quality and optimizing education structure, promoting education equity, accelerating education modernization, pushing forward the development of an innovative country and a talented country, in order to make more contributions to building a moderately prosperous society in all respects, and to realizing the Chinese Dream of national rejuvenation" (SC, 2017, p. 1). Note: This literal translation by the Education and Research Section of the Australian Embassy in Beijing and the National Centre for Education Development Research (NCEDR)

The statement above demonstrates that the educational reform is mainly focused on continuous improvement of education quality by optimising the educational structure and ensuring educational equity. How to understand, evaluate, and improve educational quality have been recognised as three interrelated upcoming issues in practice (Wang, 2017). However, there is no unified definition of education quality. Usually, it is expressed in Chinese as *suzhi*, which means merits or competency of education, covering four domains including morality (*de*), intellect (*zhi*), physical fitness (*ti*), and artistic cultivation (*mei*). In perspective of the MOE in China, educational quality complied with the philosophy of putting people in the first place and striving for comprehensive, harmonious and sustainable development (Zhou, 2004). The concept of educational quality was further promoted by adding a new dimension of promoting human development and establishing a cohesive and harmonious society, which highlighted the essence of education (Chu & Cravens, 2012). This concept reflects both traditional viewpoints of the central role of morality in education and a response to the growing materialism and pragmatism of dominant social values (Rosen, 2004).

Since 1978, the trend of economic globalisation required exploiting human resources and improving the education quality. Among low-income countries, the connections between education quality and the labour market were seen as a key state tactic for capacity development (Liu & Dunne, 2009). Consequently, Chinese national education policy started to shift its focus from primarily providing the youth with access to compulsory education to pursuing high education quality. The argument was that this will enable future citizens to cope with the challenges of international competition (Wang, 2012). Since the CELPRC was implemented in 1986, an elitist education model had dominated the whole educational system in that the state invested most of the limited educational resources into key schools (Song, 2006) which refers to junior and senior high schools where students were high-performers in standardised tests. This consequently led to increased inequity between schools in 1980s and 1990s (Feng, 2007). During that period, students' achievement or performance was reflected in the sole standard of examination scores, which put more emphasis on the acquisition of knowledge (Hu, 1992), but ignoring other aspects, such as students' morality, ideology, and life skills (Xin & Kang, 2012). More specifically, all the junior high schools regard students' exam performance as the main standard to evaluate education quality, since it determines whether students can reach the entrance requirements for the senior high school (*Zhong Kao*) and continue in their education (Su, 2008). Consequently, most of the students who perform better in other aspects than academic achievement might receive less attention from teachers, leading up to the one-sided evaluation of education quality. Moreover, the excessive pursuit of advancement rates aggravates the students' and teachers' workload and stress level, which drove the government to put forward a quality-oriented education policy (Suzhi jiaoyu) (Kipnis, 2001; Thogerson, 2000). When nine-year compulsory education had been basically realised in China, promoting students' all-round development would become a new educational objective (Xin & Kang, 2012).

The large-scale basic education reform conducted in China over the past two decades was one of the most significant events that changed the educational practice (Guan & Meng, 2007; Paine & Fang, 2007). In 1993, the guidance document *Nine-Year Compulsory Education Primary School and Junior Middle School Curriculum Plan* was issued by the State Education Commission (SEC). This policy provided guidance for innovating classroom teaching models to facilitate quality-oriented education (Wang & Wang, 1997). In order to fulfil the purpose of the new curriculum reform, first of all, "exam-oriented education" was shifted to "quality-oriented education" and some other substantial changes were made in the aspect of "educational concepts, institutions, contents, methods, and evaluation" within

internal schooling processes (Li, 2008, p. 47). Finally, in 2001, the MOE launched the NCR (New Curriculum Reform) by promulgating a document entitled "*Guidelines for curriculum reform of basic education*" (MOE, 2001). Since then, this educational reform informed by the innovated concept of education quality has been carried out by involving students, teachers, and headteachers in school and classroom practices. It was supported by the general population due to the increasing concern with student workloads and stress levels (Kipnis, 2001; Thogerson, 2000). However, the traditional examination-oriented educational system continued to play the main role in the evaluation of education quality in practice despite integrating this innovative pedagogy and curriculum (Liu, 2005). Although very limited success has been achieved in this reform which attempted to shift the focus of education quality from exam performance to students' all-round development (Thomas et al., 2012), some breakthroughs have been achieved in constructing teaching cohorts and the development of compulsory education (Dello-lacovo, 2009).

3.3.2.1 Students' Learning Outcomes

Aligning with the student-centred philosophy and individualised approach to demonstrate a fundamental understanding of education quality, the target of curriculum reform is two-fold. The recommended pedagogy was transferred from a subject-centred and teacher-leading style to a student-centred, exploratory, and interdisciplinary approach to learning. A more comprehensive approach rather than mere exam-oriented approach was promoted by the government to reduce students' high academic pressure and promote students' all-round development (Lou, 2011). This approach demanded diversification of students' learning outcomes in light of value/ethics, abilities for creativity and solving problems independently, and cultivation of citizenship (SC, 2005). From this, the general features of the new curriculum system expected in compulsory education could be summarized as closer to real-life context, more practice related to hands-on experience, more inquiry learning based on project, more autonomy for local governments and schools to set in a complementary curriculum system and for students to choose from optional units, and more priority given to students' physical and mental health, and overall development (Chu & Cravens, 2012).

Unexpectedly, a 2007 survey by educational department in Shandong province showed that 58% of teachers reckoned that students' workload was even heavier rather than it had been five years ago, and some student health indicators had worsened since more emphasis was still placed on knowledge transmission than development of students' practical and creative abilities (Dello-lacovo, 2009). Additionally, it was evident that many parents sent their

children to cram classes for better academic performance (NACEQ, 2018), which hindered progress in realising students' all-round development. Thus, as the former Minister of Education Zhou Ji pointed out, an effective evaluation system with a strengthened accountability system, evaluation criteria, and evaluation methods is needed (Marton, 2006).

3.3.2.2 Teachers' Quality and Classroom Teaching

China possesses one of the largest education systems with the largest team of teaching staff in the world. In 2017, approximately 3.5 million full-time teachers were teaching 44 million junior high school students (MOE, 2018). The teacher quality was certified by local education authorities based on teachers' credentials, such as teacher education background, qualifications, awards, and teacher rank (professional titles) (MOE, 1986). According to HRD (2015), the teacher rank system for junior high school covers five levels, including the Third Level, the Second Level, the First Level, Senior Level, and 'Zheng' senior SHS teacher. Teacher rank is awarded depending on certain characteristics that are easy to measure and observe from teachers' administrative records of awards received, higher education degree obtained, and years of teaching experience, as well as their teaching performance (pedagogical techniques and capabilities) and exemplary morality and disciplined attitudes (MOE, 1986). Teacher rank could reflect the overall quality of teachers based on multiple facets of their characteristics and performance which also have a significant impact on students' academic performance. In view of Chu et al. (2015), teachers with the highest rank are more likely to improve students' academic achievements than teachers with lower ranks. In Chu et al. (2015)'s research, among all three credentials for evaluating teacher's quality, teacher rank was found to be the only factor that could contribute to the improvement of student outcomes. Therefore, teachers' professional rank (or professional titles) is seen as a critical contributor to education quality. However, numerous studies also revealed that in China, once teachers have been awarded senior professional titles, some of them do not pay much attention to improving teaching performance or pursuing other further professional development and even withdrew from their teaching positions and transferred to administrative posts (Jianmin, 2017; Karachiwalla & Park, 2017; Minglong, 2013; Qunqing & Haiying, 2016). In contrast, those young and middle-aged teachers who act as the backbone of classroom teaching and research at schools are more willing to devote themselves to educating and teaching students so that they can obtain further promotion (Minglong, 2013). It would be necessary for school inspectorates to seek to improve motivation of senior teachers for continued teaching and professional learning.

In response to the long-term criticism of the pattern of schooling that students were "crammed" with a great amount of knowledge and high learning pressure, the new curriculum reform has sought to change the vision of educational quality and teachers' pedagogy (Paine & Fang, 2007). Specifically, the old teaching model requires more imitation and tends to neglect democratic rules and students' autonomy, while the new pedagogy emphasizes students' self-discovery, individual uniqueness, and well-rounded capabilities (Wu, 2016). More importantly, a flexible and applicable teaching approach was required to satisfy students' individual needs in non-homogeneous groups (Guan & Meng, 2007). Thus, the classroom teaching approach was changed from directly delivering knowledge to motivating students' creative capabilities, from recognising students' general characters to inspiring students' individualities, and from using a rigorous exam-centred method to promoting a formative evaluation approach (Chu & Cravens, 2012). In order to stimulate students' potential and make knowledge "alive", students were encouraged to participate in a range of activities to acquire knowledge, such as reading, inquiry, reflection, observation, operation, imagination, and creation (Yu, 2003). However, previous research (Brown et al., 2011; Wang, 2010) raised concern about teachers' abilities to learn and adapt to new teaching concepts, materials, strategies, and the new evaluation system, which is more challenging for older and more experienced teachers, although teachers can "receive training before teaching the new curriculum" (MOE, 2001, p. 2). This suggests that older and more experienced teachers are likely to observe rules rather than accept new educational concepts. Additionally, previous studies have mostly tended to distinguish participants' perspectives on the school inspection process and its impacts on education quality according to participants' posts at school (Penninckx, 2017), but rarely by their professional titles. This study intends to address this gap by comparing perspectives between teachers with senior and junior professional titles. According to previous literature, teachers with senior and junior professional titles might have different influences on student outcomes, different expectations for career development before and after being awarded senior professional titles, and different abilities to adapt to new pedagogy and educational concepts. Therefore, junior teachers are assumed to have more positive attitudes than senior teachers towards purpose, indicators, procedures, and impact of school inspection regarding innovations of educational and school inspections.

In the traditional accountability system, the performance of teachers is reflected in student outcomes. In contrast, the new teaching style emphasises that teachers should account for their own performance through engagement in continuous professional development (Qian et al., 2016; Yin et al., 2014). In Paine and Fang (2007)'s research, the two most prominent

features of professional learning were framing teachers' teaching focus on curriculum and promoting teachers' group collaboration. Before classroom teaching, teachers were required to analyse the referential materials and adjust the pedagogy to the difficulty level of the lesson. Teachers could also attend the public conversation with those "backbone" (high-performing) teachers who participated in scholar-led courses of learning and teaching theories. In this way, teachers are expected to make progress in professional capacities by studying theory-driven cases (Wang et al., 2005), which is different from the traditional "practice to practice" conducted through peer practice communication and conversation and general teaching research.

Nevertheless, Dello-lacovo (2009) reported a common complaint regarding insufficient training in the application of new pedagogy in teaching practice and a lack of specific guidance for practical learning activities. A survey conducted by the National Education Administration Institutes demonstrated that less than half of the 246 heads of county-level educational bureaus agreed that teachers in their localities had received effective guidance to enable them to adapt to the new curriculum (Yu et al., 2005). The misapplication of new classroom pedagogy was also found in Beijing, where new teaching strategies were applied blindly without consideration of their relevance to the teaching content (Beijing Report, 2006). The memorisation methods were still the major teaching method in Shanghai and Shandong province where few student-centred and inquiry-based activities were applied (Marton, 2006). Moreover, student-centred learning is challenging to carry out in rural schools with large class sizes (Wang, 2011). Consequently, the new reform brought tremendous stress onto teachers who needed to meet the new requirements for classroom teaching (Sun & Li, 2005; Yazhuan et al., 2010; Zhu & Si, 2006). Thus, a better teacher evaluation system facilitated with in-time feedback is needed to modify existing processes regarding professional development and pedagogical practice for improvement (Ehren et al., 2015) in order to accommodate the goals of educational reforms.

3.3.2.3 Headteachers' Leadership and School Management

Educational scholars and policymakers have paid great attention to educational leadership, which has played a critical role in curriculum reform (Chu, 2003; Huang, 2004). Particularly, a headteacher's instructional leadership has been repeatedly perceived to be influential in promoting school improvement (Day & Gu, 2014; Hallinger & Murphey, 1985; Heck et al., 1990; Leithwood et al., 2004) by strengthening student learning, teachers' professional development, and headteachers' self-development within China context (Bai, 2006). Hence,

under educational reforms, headteachers were required to concretise the school values, delegate power, and establish teams to open channels for communication and enhance schools' internal incentives to cope with the challenges emerging from an innovative but often volatile school system (Bai, 2006). However, Cravens et al. (2012) argued that long-term engagement in daily administrative fairs had trained school headteachers to be administrators rather than leaders, so that they may lack both knowledge and ability to develop sustainable strategies for teachers' and school's professional development.

Since 2013, more administrative power was delegated to local schools. In turn, schools would receive more accountability demands from local government in response to the trend of educational reform with more of a focus on decentralization, market-orientation, and variety (Chu & Cravens, 2010). This is primarily illustrated in the concept of transformational leadership, one of the first leadership theories to be introduced to China (Chen, 2006). It emphasises that headteachers play the main role in leading schools and school members to be more productive by adopting effective strategies in the organisational processes (Leithwood & Jantzi, 2005; Marzano et al., 2005). Consequently, headteachers started to take more responsibility for schools' long-term development, an unnecessary role in the past when planning and implementing guidelines depended heavily on top-down directives and daily management schedule rather than localised strategies. Thus, it was a challenging transition for headteachers who had not previously participated in independent planning and strategic management (Huang, 2004; Li, 2004). Additionally, the complicated policy on headteacher accountability and the relatively unchanged hierarchical system within schools might also hinder progression in education reforms (Ng & Pun, 2013).

Following the global trend of school decentralisation, particularly in the Asia-Pacific Region (Cheng, 2002), three new principles were used to guide headteachers to conduct decentralised internal school management more effectively. The first principle was evidence-based scientific school management. More specifically, "today's effective educational leaders use data extensively to guide them in decision making, setting and prioritizing goals, and monitoring progress" (Goldring & Berends, 2009, p. 5). However, it was difficult to implement this principle because of the inadequate evaluation system for local schools which could provide little constructive feedback for schools. Moreover, the difficulties in identifying multifaceted measures for school quality and lack of experience and skills to collect, analyse, and use data also hindered school-based evidence decision making (Chu & Cravens, 2012). The second principle, democratic school management, set the foundation for the scientific school management. School leaders were requested to establish professional

learning bodies and continuously seek cooperation and participation among students and teachers within a shared vision and culture which cultivated innovation and improvement (Chu, 2009). However, in many schools in China, the transparency of school management and stakeholders' (teachers, parents, and students) participation in decision making still needs improvement, particularly in the structures that lack accountability mechanisms, which leads to insufficient public supervision of school management (Chu, 2009). The third principle was legalistic school management that meant headteachers could not replace the legal regulation with their personal will. Equality and fairness were realised merely via the moral obligations experienced by some powerful people, given the long history of highly centralised governance in China in which legal and management transparency were not well established (Gao et al., 2006). As laws and rules for the educational system have been gradually completed and reinforced, leadership is facilitated by coherent and clear rules rather than leaders' personal virtues (Chu & Fu, 2011). Thus, systematic reform requires the reinforcement of supervision, evaluation of headteacher's leadership and implementation of evidence-based scientific, democratic school management to be able to legally manage education (Zhou, 2004). This justifies the involvement of headteacher leadership in the school inspection framework in China, which aimed to promote teacher's professional development and collaboration with school stakeholders, and teacher and staff participation in decision-making.

3.3.2.4 Equity

Today, the biggest challenge for China is to improve overall education quality while also addressing widening gaps in education quality between rural and urban areas and impoverished and affluent areas (Zhou, 2017). According to Tsang and Ding (2005), although the model of allocating educational resources was similar across different regions, the levels of average expenditure on students varies substantially between these regions. It is probably caused by the diverse pace of development and levels of socio-economic progress found across different areas which has hampered the balanced development of compulsory education, as well as the requirement for some element of local funding of schools. Additionally, a great quantity of evidence demonstrated that the regional gaps in educational development were mainly reflected in resource distribution, quality of teachers, and rural migrant workers' children's access to school (Du & Shen, 2010; Tao & Yuan, 2010). For instance, urban schools and key schools have been given priority in educational resources allocation, which exacerbates the imbalanced distribution of the limited resources (Zeng et al.,

2007). Consequently, imbalanced allocation of educational resources has led to a large gap in school quality.

Similar to many high-income countries which have been experiencing increasing migration from less developed areas, by 2013, some 165 million rural labours have migrated to urban areas in China, accounting for 12% of the total population of China (NBS, 2014). As a result, numerous rural migrant worker children who arrived as children or were born in cities consist of an ever-increasing share of the student population (Hao & Yu, 2015). It is a great concern that such pupils continue to receive unequal learning opportunities after they enter urban schools. Hao and Yu (2015), who conducted a study pertinent to the schooling of rural-urban migrants, argued that three variables concerning learning opportunities in school were less favourable for migrants than their urban counterparts. These three variables, including school rank, the teacher-student bond, and school academic climate, were more conducive than school facilities and class sizes to learning outcomes. This suggested that satisfying students' different educational needs and improving the schooling process might account more for reinforcing educational equity than increasing physical inputs in the context of China. Furthermore, compared to rural migrant students, urban students might be more privileged in being able to access better educational resources at home, and experience more parental support in terms of nutrition and being within a positive learning climate (Lee et al., 2016; Yiu & Luo, 2017). As a result, students' differences in the accumulation of cultural capital emerge, even if they possess similar intellectual capacity.

Therefore, accessibility to external intellectual resources, such as the quality of the teacher, is essential to improve the education quality of rural schools (Jin et al., 2013). Importantly, teachers with teaching experience of 10 years or more made up 72% of the total teachers in the urban areas; 67% hold a bachelor's degree. Conversely, smaller proportions of teachers in the rural area had similar teaching experience (37%) and education background (34%) (Li, 2016). The lack of high-quality teachers seriously influences compulsory educational development in rural areas (McQuaide, 2009). Specifically, urban students' academic achievements were usually better than rural students (Wan & Zhou, 2005). This occurred because, on the one hand, insufficient funding made it difficult for rural school teachers to receive essential training and professional development, which set barriers for promoting education quality in rural areas (Zeng et al., 2007); on the other hand, rural teachers' low-self-efficacy brought by low salaries and poor pensions prevented rural schools from recruiting professional and competent teachers. The shortage of funding and poor teacher quality resulted in difficulties in implementing the educational policy to realise fundamental

improvement of education quality in rural schools (Li, 2016). Additionally, a shortage of teaching staff exacerbates the already-heavy workload of rural teachers who had to take care of students day and night in addition to their teaching responsibility, particularly in boarding schools where students' home was far from the school (Mei et al., 2015). Consequently, rural school teachers were more likely to fail to satisfy the general requirements of teaching syllabus (Li, 2016), and they were incapable of showing concern for all students (Blatchford, 2003). Rural schools exhibit an increased number of migrant workers' children (Sun & Xu, 2015), which poses challenges for the teachers. An atmosphere of competitiveness and utilitarianism is typically found in urban schools, where students' academic achievement was given with greater importance by urban teachers than those found in rural schools. This further enlarges the gap in student academic achievements between urban and rural areas.

From above, inequity in education quality is mainly reflected in the discrepancy between urban schools and rural schools; there are significant regional disparities in terms of resource allocation, migrant children's access to schooling, and teacher's quality (Du & Shen, 2010; Tao & Yuan, 2010). Therefore, participants from different schools might have different perceptions of the importance of school inspection indicators in demonstrating education quality, due to a difference in school contexts, such as school location and quality of student intakes. For instance, participants from rural schools might be more supportive of indicators regarding teacher quality than participants from urban schools, and participants from a school with a higher proportion of migrant students are more likely to approve indicators concerning learning opportunities to demonstrate education quality. Finally, the gap in education quality between regions and schools is still seriously hindered balanced development of education (Zhu et al., 2017), which requires strengthening external accountability systems, constructing a feasible school inspection framework, and reinforcing standardisation of school inspection process so as to monitor and promote educational equity (Li & Zhu, 2016).

3.4 Development of School Inspection System in China

3.4.1 School Inspection System Strengthens Quality of Compulsory Education

Educational inspectorates in China have been regarded as authorities which take charge of monitoring, inspecting, evaluating school education quality, and seeking school improvements by providing directive guidance. Inspection emphasizes monitoring and evaluation of school performance by an external agent (e.g. inspector) and reinforces teaching and learning activities in a formal way, which differs from supervision. Supervision concerns

the improvement in teacher performance and student learning by strengthening an effective teaching and school environment in a soft and informal way (Nwaokugha & Danladi, 2016).

In October 1986, the SC approved re-establishment of The Department of National Education Inspectorate in the previous National Committee of Education (NCE) (Yang & Guo, 2005). In 1991 NCE issued *Educational Inspection Temporary Provisions* which served as the fundamental legal guidance for implementing school inspection policies (Yang, 2007). In 1993, the Educational Inspection Office (EIO) was established and attached to the Ministry of Education today. In the same year, *The Outline of Educational Reform and Development in China* was published by the SC; this document formulated inspection standards for regular inspections of the quality of all types of education, including primary and junior high schools (Rasmussen & Zou, 2014). This indicates that the school inspection system of China began to take the main responsibility for monitoring education quality in schools. In 1995, the SC required the local educational inspectorates at each level to supervise and monitor popularization of compulsory education, which further strengthened the functions of educational inspectorates in examining the outcomes of educational policy implementation (Han, 2011).

Since June 1999, guaranteeing the implementation of quality-oriented educational policy and supervising education quality became an important responsibility of educational inspectorates, after publishing a series of education reform policies to promote comprehensive quality-oriented education (MOE, 2015a). In 2000, the EIO was renamed as the National Inspectorate of Education (NIE). Its main obligations were comprised of researching and formulating policy, regulations, indicators system of educational inspection and evaluation; guiding, supervising, evaluating the implementation of educational policies by local governments; and ensuring implementation of quality education policies and realisation of educational goals (MOE, 2015a). The inspectorate system was constructed with four levels, including the central government, the province, the city, and the county (NIE, 2005). By the end of 2009, the branches of NIE have been established in all 31 provinces over the country. 91.1% of Educational Inspectorates were set by the SC in each city with 2716 subordinates of educational inspectorate constructed at the county level (Huang, 2009). Thus, completing and improving local policies of educational inspectorate is the key to improving the national educational inspectorate's whole policy system. On October 12, 2011, the NIE issued *A Framework of Inspection Evaluation Indicator System of Quality Education of Primary and Secondary Schools of China* ("National Framework" for short), in order to further promote overall application of quality-oriented education in the primary and secondary school and

improve nationwide education quality (MOE, 2011a). Also, a collaborative dialogue between the school inspectorates and the school is desired in order to identify and address different needs of schools within different contexts (Lee et al., 2008; Ning, 2015; Zhao & Lan, 2017).

With educational reforms gradually boosting educational quality in schools, more attention was paid to the balanced development of education quality across different regions in the whole country. In 2006, the revised CELPRC by NPC Standing Committee stipulated that the SC and provincial governments were supposed to distribute educational resources reasonably and promote balanced development of compulsory education. For the sake of comprehensively propelling the balanced development of compulsory education, the SC issued the reform scheme for promoting balanced development through educational inspection and evaluation (Zhu et al., 2017). Next, in 2012, the MOE established a supervision and evaluation system of balanced development of compulsory education within county regions by publishing *Interim Procedures for Supervision and Evaluation of Balanced Development* of *Compulsory Education within the County* (MOE, 2012a). Since 2013, educational inspectorates have started evaluating and monitoring the level of balanced development across urban and rural regions and schools (Yang, 2014). From 2010 to 2014, there were five provinces which achieved balanced educational development, evidenced via aspects of educational input including supportive policy, funding and investment, school infrastructure, and construction of teaching staff teams. However, the remaining provinces still had not achieved balanced development (MOE, 2015b). Moreover, currently, the government is engaged in strengthening educational equity in the allocation of educational resources and accessibility to compulsory education quality but has not started paying attention to equity in schooling processes (e.g. classroom teaching etc). The discrepancy of equity in light of schooling quality across different regions is not likely to be resolved in a short time (Zhu et al., 2017).

From above, the series of reforms that China's educational inspectorates system has undergone is recognised as a breakthrough in transforming government's management roles in education (OECD, 2016). However, considering that current school inspection system remains to be completed and improved (Huang, 2009; Yang, 2007), more empirical research aiming to address practical issues of school inspection system in Chinese context is needed (Li et al., 2016).

3.4.2 Purpose of School Inspection System in China

The "National Framework" issued in 2011 aimed to improve the consistency and quality of the inspection process across provinces in China, enhance overall educational quality of primary and secondary schools, supervise schools to comply with laws and regulations, and ultimately promote development of students and schools through these improvements (MOE, 2011a). Thereby, both purposes regarding improvement and accountability along with compliance with legal regulations were demonstrated in the national inspection framework.

3.4.2.1 Compliance with Legal Regulations

In the long-term, the school inspection system has been an administrative practice of making judgements, and evaluating and directing schooling processes and educational outcomes, all of which are conducted by the educational inspectorates based on scientific state-issued educational law, regulation, and policy (Han, 2011). In the past two decades, the educational inspectorates' roles in monitoring and promoting schools to conform to educational legal regulation have been highlighted, such as ensuring school-age students' enrolment rates for compulsory education schools, correcting schools' unlawful behaviours, and supervising schools to reduce students' excessive learning burden (Huang, 2009). Thus, monitoring and promoting schools to comply with legal regulations was the first and earliest purpose of school inspection system in China. Lee et al. (2008) and Ning (2015)'s research revealed that school inspectors in Shanghai heavily relied on predetermined criteria and regulations to ensure schools' compliance regardless of school practitioners' beliefs, values, and preferences. Previous research in middle-and-low-income countries found that paying particular attention to checking compliance to regulations during school inspections was not related to school improvement and would even take time away from schools to concentrate on actual improvement of student performance (Chen, 2011; Darvas & Balwanz., 2014; Uwazi., 2009). Therefore, it is essential to identify current school inspection purposes through the process of implementing school inspection in practice so as to find a way to improve the school inspection system.

3.4.2.2 Accountability

In opposition to supervision that supports formal evaluation by offering ongoing assistance to teachers to enhance internal school improvement (Jaffer, 2010), school inspection is prone to external summative evaluation focused on accountability. Moreover, the close relationship between schools and administrative hierarchy (Scheerens et al., 2003) represents one form of administrative accountability (Aadams & Kirst, 1999), which tends to be more judgmental

and controlling in favour of school inspection. This means schools as collective entities are accountable to the senior level in the educational system (O' Day, 2002). In China, school inspection rests on bureaucratic authority which does not originate from educational inspectorates but from the education department's administrative power (Sun, 2004; Yang, 2007).

In 2010 as was stated in *The National Guideline for Medium-and Long-Term Educational Reform and Development (2010-2020)* (SC, 2010), the following decade from 2010 to 2020 would see the improvement of educational inspectorates as a primary supervision accountability mechanism. In 2012, State Council Educational Inspection Committee Office was established, which means that the administrative power of the NIE has been taken over by the SC from the MOE (SC, 2012a). In the same year, the SC issued *The Educational Inspection Ordinances (TEIO)*, which was the first set of professional legal regulations mainly concerning school inspection (SC, 2012b). It recognised that the educational inspectorates could perform administrative power independently and equally to other educational administrative departments, which supplied legal support for educational inspectorates to play an inspectorate role in accountability more efficiently (Song & Yue, 2013). On 1st February 2016, the NIE was renamed as the National Bureau of Educational Inspectorate which is subordinated to the SC. However, in practice, educational inspectorates can only rely on administrative power delegated by educational departments to perform their functions because of the educational inspectorates' dependent relationship with educational administrative departments.

Although they share the equal legal status, the educational inspectorate as an inner division in the education department has no independent financial and personnel power, which prohibits the educational inspectorates from effectively exercising an independent inspectorate role with external accountability (Zhang, 2011). Thus, this gives rise to an awkward situation where local authorities inspect their own schools, which largely weakens educational inspectorates' accountability in supervising and restraining local authorities and schools (Han, 2011). Additionally, since the school inspection system was rebuilt, it has not been specified if the educational inspectorates possess the power to punish or reward schools in addition to proposing suggestions for school improvement to the senior authorities. This has had a passive impact on the effective utilisation of school inspection results (Han, 2011; Yang, 2007). Consequently, even if the local governments or subordinates of government disregard educational law and regulations, the educational inspectorates will be unable to investigate and give punishment due to the lack of necessary administrative power (Song & Yue, 2013).

Researchers have argued, the power of investigation, examination, and accountability are essential and inter-related in the complete administrative supervision to strengthen educational inspectorates' restrained force and authority (Huang, 2009; Zhang, 2011).

3.4.2.3 Improvement

Improvement as another critical purpose of school inspection could be realised with professional guidance offered by the inspectors. After keeping all schools developing on the "legal track" according to the preliminary stages of the progression of educational legalisation, promoting school improvement would gradually become the most important goal instead of supervising schools to conform to current legal regulations (Zhang, 2011). Apart from monitoring and supervision, only when schools receive professional guidance for improving internal schooling processes and outcomes could educational inspectorates fulfil the demanded obligations and reflect the values of school inspection (Huang, 2009; Zhang, 2011). The school inspection mechanism is indispensable for the healthy and sustainable development of education in China today in that it is playing a crucial role in addressing the existing issues of school by comprehensively examining schooling processes and guiding schools to develop in the right way (Han, 2009; Lee, 2010).

According to OECD (2013a), improvement may be achieved by enhancing teaching and learning in the schooling processes after school evaluation has identified the areas that are in need of improvement. School inspection as a monitoring tool could yield data in a more localised or contextualised way, and context-rich means are often applied for development actions (Ehren et al., 2015). This means that good school inspection should be localized, considering the socio-economic context of each region and the school's nature so that inspectors can present specific and practical suggestions for school improvement (De Grauwe, 2008; Han, 2009; Huang, 2009). However, stronger bureaucratic accountability, along with weak external accountability is still playing a main role in school inspection within the Chinese centralised system, as teachers have adapted themselves to the directives of the defined inspection system and follow them mechanically (Lai & Lo, 2007). Considering that numerous studies proposed the need to pay more attention to school inspection for the purpose of improvement (Lee et al., 2008; Ning, 2015; Yang & Lv, 2015; Yang, 2007) and limited empirical research on school inspection system is available in China (Li et al., 2016), more context-based research is needed to identify the main role that school inspectorates are playing in the practice of school inspection in relation to improving education quality.

3.4.3 National School Inspection Framework

3.4.3.1 Outline of School Inspection Criteria

Educational inspectorates evaluate school quality based on inspection criteria and standards. The content of criteria is also closely associated with inspection purposes since schools need to examine to what extent the instruments and methods employed to evaluate a school can realise the objectives stated in the school plan (Eurydice, 2015). In alignment with the goals of national school inspection in China, the national inspection framework lays down six dimensions, including the vision of the school, school leadership and management, school regulation and legal aspects, moral education and activities, classroom teaching and school outcomes (MOE, 2011b). Although it does not show ready-made sub-criteria subordinated to each dimension, each dimension is illustrated by several key recommended components. This framework is a national recommended outline, and essentially it sets up the basic criteria proposed by the NIE, which are then employed by the provincial and local inspectorates to develop specific sub-criteria and measures fitting for regional contexts. The content of the national inspection framework is shown in table 3.1 below (MOE, 2011b).

Table 3.1: National School Inspection Criteria Outline

Dimension	Key Points
1. Vision of school	1.1 Educational Concept • Students' overall development • Ability • Morality 1.2 Compliance with law of education
2. School leadership and management	2.1 School development plan 2.2 Responsibility mechanism 2.3 Self-evaluation 2.4 Education quality evaluation 2.5 Safety and health in school
3. School regulation and legal aspects	3.1 Compliance with educational regulations and laws. 3.2 Keeping school and classroom in order. 3.3 Releasing students' learning burden 3.4 Teachers' evaluation 3.5 School financial policy
4. Moral education and activities	4.1 Goals and plans for moral education 4.2 Moral education in classroom teaching 4.3 Students' time for learning and activity 4.4 Schools' collaboration with parents, community, and society
5. Classroom teaching	5.1 Curriculum quality 5.2 Teaching pedagogy 5.3 Teaching meets learning needs of different students 5.4 Students' evaluation 5.5 Students' learning time
6. School outcome	6.1 Students' outcome • Cognitive outcome • Social outcome • Students' physical health 6.2 Schools' outcome • School development

Note: Source: **MOE. (2011a).** Supervisory Evaluation Indicators System of Quality Education of Primary and Secondary Schools of China.

3.4.3.2 Procedures of School Inspection

In the school inspection system in China, the national inspectorates are responsible for supervising and monitoring the outcomes of inspection implementation in local areas, summarizing beneficial experiences from outstanding local inspectorates in school improvement, and awarding countrywide high-performing schools in quality education. However, the actual work of school inspection is conducted by inspectors from the city and district inspectorates who construct and implement specific procedures for school inspection, such as visiting schools, giving feedback to schools and providing inspection results. All these procedures for implementing school inspection should be conducted under the provincial guidance, making use of provincial inspection standards and implementation plans for inspecting primary, junior, and senior high schools (MOE, 2011b).

Schools are required to conduct self-evaluation based on inspection standards made by provinces and direct-municipalities. These self-evaluation results, which are required to be submitted to inspectorates before formal school inspection, are important to influence the overall external school inspection performance. In the process of school inspection, the major methods of school inspection include class observation, questionnaire survey to students, teachers and parents, observation of school environment and interviews. They help identify issues in schooling processes and education quality in practice, which is more than merely distinguishing between well performing and poorly performing schools (MOE, 2012b). After school inspection, schools are required to improve and change the current schooling practices according to the inspectors' feedback and suggestions. Afterwards, schools are required to report the circumstances of school improvement to senior inspectors so that a follow-up inspection might be initiated, if necessary (MOE, 2011a).

3.4.4 Four Provincial School Inspection Frameworks

According to OECD (2013a), a certain degree of consistency across the country in evaluation methods should be ensured in an attempt to line up evaluation practice with national educational goals. However, in China, due to the previous series of educational reforms, local autonomy to some extent is granted to the formulation of school policies, curriculum development, and evaluation. Considering the influences of different national political systems, educational mechanisms, and governing instruments on the existing educational inspection system, governance procedures, inspection methods and the impact of mechanisms are consequently varied (Ehren et al., 2015). In the context of China, though all provincial educational inspection systems are run in a common political context with common

governance mechanisms, it is important to highlight that school inspection may be carried out with different methods and procedures in part owing to the diversity of geographical locations, culture, and socio-economical situations. The approach employed is to pursue a consensus of national general principles, but remain flexible to better meet provincial needs (OECD, 2013a). Employing diverse methods allows for local innovation and the large degree of regional and school autonomy, which may encourage school collaboration to adapt to local evaluation procedures and yield trust, commitment and professionalism; however, this approach may also lead to unsystematic application of the national policy and inconsistency of practices (OECD, 2013a).

Following the previous administrative decentralisation, the local authorities have taken over from the central government the responsibilities of managing basic education. The responsibilities include the allocation of educational resources, deployment of school principals and teachers, and the provision of guidelines for primary and secondary schools (Liu & Dunne, 2009). This reform laid the foundation for each province to formulate provincial school inspection criteria based on central guidelines and provincial contexts today. Thus, school inspection in each region is largely dependent upon local inspection criteria, and different inspection standards tend to give rise to different levels of education quality, particularly between the rich and poor areas. This research seeks to explore the similarities and differences in provincial standards of Shandong provinces, by focusing on four representative provinces in different geographical areas as well as the potential effective indicators to contribute to the national inspection framework.

Based on the *National Framework*, the equivalent provincial documents with respect to more detailed criteria fitting for the context of each province and direct-municipality were published. As a huge country, there are 31 provinces and direct-controlled municipalities (excluding Hong Kong and Macao) in China, all of which are diverse in developmental levels and quality of education related to diverse contexts in economy, culture, and geography. Therefore, in order to consider and critique the range of developmental circumstances of school inspection systems in each province, the school inspection documents issued by four provincial inspectorates located in different regions in China were reviewed to lay out the major characteristics and focuses of the school inspection framework at the provincial level.

The four provinces were also selected based on their educational finance data which are used to indirectly reflect the quality of compulsory education (Wang et al., 2013). For example, in China, "education business fees of each student on average", covering public fees for

teaching staff salary and welfare funds, teaching facility, school infrastructure, teaching, books, and so on (Yin & Li, 2014), is used as an indicator to reveal the level of the educational fund (Wang et al., 2013). On October 8th, 2018, the MOE and State Statistics Bureau released data of *Student Education Business Fees on Average in 2017* (MOE & State Satisitc Bureau, 2018) involving data from primary and secondary schools in 31 provinces and direct-controlled municipalities. Different levels of education quality in different regions were reflected by ordering and sorting student education business fees for secondary schools (see Appendix IV). According to the developmental level of education and geographical distribution in China, the school inspection frameworks formulated by Jiangsu (2012) (in the east) and Jilin (2012) (in the northeast) at a higher level of development, and Shannxi (2012) (in the northwest) and Guizhou (2007) (in the Southwest) at a lower level of development were selected for review.

3.4.4.1 Comparing Inspection Criteria of Four Provinces

Based on available documents, evidence in the four reviewed inspection documents indicate the most common criteria of school inspection employed by four provinces as summarized in table 3.2 below. To achieve this, the criteria formulated by the four provinces were coded, comparing them against the national inspection framework to generate initial codes and key themes. These key themes then were combined, separated, and deleted as needed to ensure their meaningful coherence and distinction; this created an exhaustive code list.

Table 3.2: Common Inspection Criteria Identified in Inspection Framework Documents from Four Chinese Provinces

Dimension	JS	JL	S	G
1. Vision of School				
1.1 Set moral education as priority to promote students 'all-round development	√	√	√	√
1.2 Clear goal of schooling	√	√	√	√
1.3 Insist on and carry our national policy		√	√	√
• Quality education concept is reflected in the process of schooling.				√
2. School Regulation and Legal Aspects				
2.1 Students' enrolment				
a. Schools do not set in key classes to distinguish students' difference in academic performance and other skills.	√	√	√	√
b. Children of rural migrant workers in cities receive compulsory education equally to urban children.		√	√	
2.2 Reducing student learning Burden				
a. Students' in-school learning time is controlled within 7 hours.	√		√	√
b. The times that examinations are held within one term and should not be go beyond twice.	√	√	√	
c. Schools are not allowed to make up for missed classes on holiday and weekends.	√	√	√	√
d. Schools are not allowed to rank and publicise students' examination performance.	√	√	√	
e. Students' written homework should be finished within one and half hours.	√		√	√
• For students in grade 7 and grade 8				√
2.3 Promote students' all-round development				
a. Students' academic performance is not the only criteria to evaluate teacher and student quality.	√	√	√	
b. Regularly monitor and check students' health status	√	√	√	
c. An art festival or art performance is held once per year.	√	√	√	
3. School Leadership				
3.1 Headteachers are familiar with and manage schools based on national legal regulations.			√	√

3.2 The number, professional structure and ages of staff in a leaders' team is reasonable.			√	√
3.3 Build-up faculty delegates' congress and parents committee system			√	√
3.4 Headteachers are responsible for observing and evaluating classroom teaching.	√	√	√	√
• Leaders and headteachers observe classroom teaching for no less than 60 and 30 lessons		√		
• Headteachers observe classroom teaching no less than 30 lessons per term			√	
• Attend and provide guidance for curriculum reform and teaching research				√
4. School management system				
4.1 School environment				
a. School layout is reasonable.	√		√	√
b. School culture demonstrates schools' features.	√	√		√
c. The environment around the school should be clean and keep unhealthy information from students.		√	√	√
4.2 School security				
a. No serious accidents happened.	√	√		√
b. Built up a defence and control system for the school security.	√	√	√	√
c. Enhance teachers and students' sense of self-protection from risks		√	√	√
• Involve curriculum regarding strengthening students' sense of self-protection				√
4.3 Evaluation system				
a. Build up a comprehensive evaluation mechanism of education quality and student outcomes.	√	√	√	
4.4 Administrative management				
a. Financial management strictly complies with national regulations.		√	√	√
5. Classroom teaching				
5.1 Moral education				
a. Moral education is fed into all the processes of schooling.	√	√	√	
b. A network for moral education involving school, family and society should be developed.	√	√	√	√
5.2 Student learning				
a. Various art activities are held in school and outside of school.		√	√	√
b. Students attend various forms of practical activities in community, such as labour service.		√	√	√
c. Schools should direct students in aspects of mental health.	√	√	√	
d. Development of school-based curriculum		√		√
• To satisfy students' needs of character development	√			
5.3 Teachers' classroom teaching				
a. Students act as main part in classroom teaching.	√		√	√
• The classroom teaching time for students' collaborative exploration of learning issues, discussion, presentation and practice should occupy no less than 2/3 of the whole classroom teaching.			√	
b. Students' learning interests are stimulated during classroom teaching.	√		√	√
c. Make and put forward effective and efficient classroom teaching plans.	√		√	
d. Construct an equal, interactive, democratic, harmonious and effective classroom teaching model.		√	√	
e. All students are treated equally.			√	√
f. Personal tutoring should be applied into classroom teaching.			√	√
g. Teachers take measures to help poor students improve academic achievements.	√		√	√
h. Teachers can reflect on if the effects and teaching goals have been realized in teaching process.	√		√	√
5.4 Teacher professional development				
a. Teachers' morality is regarded as critical evidence for recruitment and evaluation of teachers.	√		√	
b. Teachers are self-disciplined and with high morality.	√	√	√	
c. Teachers are required to attend education and teaching research.		√	√	
• No less than 2/3 of all the teachers attend education and teaching research		√		
• No less than 1/3 of all the teachers attend education and teaching research			√	
d. Teachers are capable to identify issues in teaching practice to conduct research independently.			√	√
6. School Quality				
6.1 Academic achievement				
a. The rates of students who are qualified to graduate in each grade reach national standards.	√	√	√	√
6.2 Social outcomes				
a. Most students are able to communicate and collaborate with others.		√	√	√
b. Students have civic awareness and sense of social responsibilities.	√	√	√	√
6.3 Characteristics/Value				
a. Students' good moral traits and characteristics have been developed	√	√	√	√
b. Students comply with laws and school regulations.		√	√	√
c. Students have positive views on the world, views on life and values.			√	√
d. Students have developed healthy aesthetic appreciation and interests	√	√		√
e. Students have basic knowledge about keeping mental health.			√	√
6.4 School quality				
a. Schools are advantageous and unique in education, teaching, management and research.	√	√	√	√
b. Schools' experience of improving education quality positively influences in certain area.	√	√		
c. School quality is satisfied by stakeholders.	√	√		

•	90% of students, parents, and society are satisfied with school quality.	√			
•	High reputation in society		√		
d.	Teachers and students have high sense of safety, achievement, and happiness.	√			

Note: JS=Jiangsu, JL=Jilin, S=Shanxi, G=Guizhou; √= the indicator shown in the table is mentioned explicitly in one of the provincial inspection documents. • = four provinces' different focuses of each indicator

Source: **Jilin, E. I. O. (2012).** *Inspection Indicators System of Education Quality for Primary and Secondary School in Jilin*. Jilin: Educational Inspection Office of Jilin; **Jiangsu, E. I. O. (2012).** *Inspection Indicators System of Education Quality for Primary and Secondary School in Jiangsu*. Jiangsu: Educational Inspection Office of Jiangsu; **Guizhou, E. I. O. (2007).** *Inspection Indicators System of Education Quality for Primary and Secondary School in Guizhou*. Guizhou: Educational Inspection Office of Guizhou; **Shannxi, E. I. O. (2012).** *Inspection Indicators System of Education Quality for Primary and Secondary School in Shannxi*. Shannxi: Educational Inspection Office of Shannxi.

In terms of the vision of the school, all provinces mentioned clear schooling goals and promoting students' all-round development following the core idea of quality-education reform. Although three provinces stress implementation of educational policy, S pays more attention to the concept of quality education which provides guidance for schooling. With regards to school regulations and legal aspects, similarities are reflected in reducing students' learning burden, fostering students' all-round development, and promoting equity, which accommodates the school inspection purpose of compliance with legal regulations. Students' learning burden is reduced by controlling the time for students' in-school learning and homework and the times of running academic exams and prohibiting classes during holidays. Despite the same hour regulations in three provinces, G restricts the application of this indicator only to students in grade 7 and 8, excluding students in grade 9, who will attend entrance examinations for senior high school. This suggests that G province might place more emphasis on enrolment rates for senior high school in comparison with other provinces. All four provinces commonly present the indicators regarding physical health examinations, organising art activities, and using multiple criteria for evaluating student and teacher quality to promote students' all-round development. Equity is enhanced by prohibiting setting separate classes for high performers and ranking student academic performance and accepting migrant students' access to compulsory education.

Next, the indicators concerning school leadership commonly emphasise headteachers' roles in promoting a school's compliance with legal regulations, the reasonable structure of the leadership team, and distributed leadership to school staff and parents. In terms of instructional leadership, JL and S specify the number of hours of classroom observation that headteachers are required to finish in one term, but G only gives a general stipulation about headteachers' regular participation in teaching research activities. Additionally, the indicators related to the school management system are commonly focused on the school environment, safety issues, administrative management, and comprehensive evaluation mechanism. Regarding safety issues, G places safety education into curricular system, which probably results from G's geographical location, where natural disaster takes place more frequently

than other provinces. In terms of classroom teaching, the indicators approved by all the provinces are related to teachers' teaching and students' learning. Regarding teachers' teaching, the most commonly approved indicators measure teacher's morality, impartial attitudes towards all students, teachers' professional development, structured teaching, and democratic interaction with students. Though teachers are required to attend education research, JL and S set different standards related to the proportion of schoolteachers who are required to attend. The most consistently approved indicators concerning students learning are reflected in school culture, school physical environment, students' active participation in classroom teaching, and development of school-based curriculum. Although three provinces mentioned that students should play the main role in classroom teaching, only S specifies how much time should be allocated to students' participation in classroom teaching. The other difference lies in setting the school-based curriculum. Only JS clarifies its goal of satisfying students' needs for character development; other provinces do not. Finally, the most commonly mentioned indicators regarding school quality measure students' characteristics, values, social outcomes, and the school's impact in a certain area. However, JS and JL also include indicators regarding stakeholders' satisfaction with school quality in their frameworks. Moreover, JS not only specifies that the degree of stakeholders' satisfaction should reach 90%, but also concerns teachers' and students' overall well-being.

The review of frameworks in four provincial inspectorates demonstrates that a certain degree of national consistency in inspection criteria and purposes has been achieved. The national consensus is perceived to be essential for successfully employing and implementing policy initiatives by a number of researchers (Corrales, 1999; Finlay et al., 1998). Also, some key differences in school inspection indicators of four provinces were identified, since different contexts will give rise to different priorities in developing provincial school inspection frameworks. As the combination of top-down and bottom-up initiatives is acknowledged to strengthen national consistency (Finlay et al., 1998), key stakeholders, should be engaged in evidence-informed policymaking in response to broader social and economic needs and goals for the educational system (OECD, 2013a). Thus, in this research, school inspection practitioners, such as headteachers, teachers, school inspectors were invited to provide their perspectives on the importance of school inspection indicators to demonstrate education quality in order to better tailor inspections to the local contexts.

3.4.4.2 *The relationship between the national and the provincial inspection frameworks in China and the international theoretical framework*

Through reviewing inspection criteria at the state level and province level, the content of the six key dimensions and sub-categories could be mapped against three core concepts of education quality: outcome, process, and equity (see Chapter 2 section 2.2.1). At the province level, dimension 1 "vision of school" is seen as one of the key elements of school effectiveness and also a powerful component of leadership in an effective school (Murphy et al., 2007). It establishes a clear sense of goals for school development which could influence school leaders' action on future school development (Day et al., 2009). Thereby, dimension 1 can be incorporated in dimension 3 "school leadership". Dimension 3 "school leadership" and dimension 4 "school management" could jointly contribute to schooling processes at the school level, and dimension 5 "classroom teaching" is attributed to schooling processes at the classroom level (see Chapter 2 section 2.3.1). Dimension 6 "school outcome" is underpinned by the concept "outcome" and includes a new component "school development" in addition to "student outcomes". The third concept "equity" is reflected in dimension 2 "school regulation and legal aspects" which attempts to ensure "equity" via legal power according to the inspection frameworks of European countries (see Chapter 2 section 2.4.2.3). Regarding the national framework, its only difference from the provincial framework is in its consideration of "moral education and activity" as a separate dimension. However, the provincial frameworks involve "moral education and activity" in the dimension "classroom teaching", considering "moral education" as a part of classroom teaching in the schooling process which plays a more direct role influencing students' social outcomes, such as value, morality, and attitudes, (Faubert, 2009). Therefore, the national and provincial inspection indicators are categorized based on four basic dimensions drawn from international theories, including "compliance with legal regulations", "organisation and management in the school", "teaching and learning", and "students' outcome". The complete theoretical framework informed by international theories and inspection documents in the context of China is shown in table 3.3 below.

Table 3.3: Conceptual Framework of Education Quality Combining International Theories and Inspection Criteria of China

International Contexts		National Inspection Criteria in China	Common Provincial Inspection Criteria
Dimensions	Sub-categories		
1. Compliance with legal regulations	1.1 The obligations of provision of education-access and quality	1.1 Compliance with educational regulations and laws. 1.2 Releasing students' learning burden 1.3 School financial policy	1.1 Students' enrolment 1.2 Reducing students' learning burden 1.3 Promoting students' all-round development
2. Organisation and management	2.1 School Environment • Positive climate • Environment safety • Inclusive environments	2.1 School Environment • Safety and health in school • Keeping school and classroom in order.	2.1 School Environment • School physical environment • School culture

in the school	• Effective school discipline policies • Non-violence		
	2.2 Achievement-oriented school policy • Administrative support and leadership • Collaboration and interaction between teachers • Families and communities are engaged in education • Reliable assessment	2.2 Educational Leadership 2.2.1 Organisation • School development plan • Responsibility mechanism 2.2.2 Vision of School • Students' overall development • Morality	2.2 Educational Leadership 2.2.1 Headteachers' instructional leadership 2.2.2 Democratic management model 2.2.3 Vision of School • Moral Education • Clear goal of schooling • Carry out national policy
		2.3 School Management • Self-evaluation • Education quality evaluation	2.3 School Management • School security management system • School evaluation system • Administrative management
3. Teaching and learning	3.1 The quality of teaching • Opportunity to learn • Curriculum quality • Effective learning time • Structured teaching • Teach to the level of students • Teacher-learner relationship • High expectation for all students • Using new technologies to facilitate teaching • Active, standard-based participation methods • Continuing support for student-centred learning	3.1 Moral Education and activities • Goals and plans for moral education • Moral education in classroom teaching • Students' time for learning and activity • Schools' collaboration with parents, community, and society	3.1 Moral Education • Moral education is feed into all the processes of schooling. • A network for moral education involved by school, family and society should be developed.
		3.2 The quality of teaching • Curriculum quality • Teaching pedagogy • Teaching meets learning needs of different students	3.2 The quality of teaching • Structured teaching • Active, standard-based participation methods • Continuing support for student-centred learning
	3.2 The quality of students' learning • Accessibility to learning resources • Reinforcement	3.3 The quality of students' learning • Students' evaluation • Students' learning time	3.3 The quality of students' learning • Art and physical education • Development of school-based curriculum
	3.3 Teachers' Development • Teacher competence and school efficiency • Ongoing professional development • Motivation	3.4 Teachers' Professional Development • Teachers' evaluation	3.4 Teachers' Professional Development • Teachers' morality • Attend teaching research activities.
4. Students' outcome	4.1 Academic achievement • core subject knowledge	4.1 Students' outcome • Cognitive outcome	4.1 Students' outcomes • Academic achievement
	4.2 Social outcomes	4.2 Social outcomes • School development • Social outcome • Students' physical health	4.2 Social outcomes • Schools have their own uniqueness. • Social abilities • Physical and mental health

3.4.4.3 Comparing School Inspection Procedures of Four Provinces

In order to identify the overall characteristics of the inspection system across different provinces, the implementation processes of school inspection in the four provinces were reviewed and compared. Based on available documents, evidence in the four reviewed inspection documents indicate the most common procedures of school inspection employed by four provinces as summarized in table 3.4 below.

Table 3.4: Common Inspection Procedures Explicitly Mentioned in Inspection Framework Documents

from Four Chinese Provinces

Inspection Procedures	JS	JL	S	G
1. Frequency/Methods				
1.1 Frequency of School Visit				
a. Schools should be inspected by provincial school inspectorates once within every 3 years.	√	√	√	
1. Schools should be inspected once within every 2 years by provincial school inspectorates				√
1.2 Self-evaluation				
a. The results of school self-evaluation should be reported to the senior inspectorates every year.	√	√	√	
2. The results of school self-evaluation should be reported to the senior inspectorates regularly.				√
b. Before formal school inspection, school self-evaluation reports should be submitted to the senior inspectorates.	√	√	√	
1.3 School Visit				
a. Local inspectorates should inform the school in advance about the dates, content, and methods of school inspection and publish to the public.	√	√	√	
b. School inspectors receive and examine school self-evaluation report before school visit.	√		√	
c. School leader-group should make the report to inspectors.	√		√	√
d. Questionnaire survey	√	√	√	√
e. Looking up school documents	√	√	√	√
f. Random classroom observation	√	√	√	√
g. Schoolyard observation	√	√	√	√
h. Panel Interview	√	√	√	√
i. Obtaining advice from parents and students	√	√	√	√
j. Individual interviews	√	√	√	√
2. Standards/Thresholders				
3. Each city can add indicators/standards based on local contexts.	√			
4. A four-point grading scale is employed: outstanding, good, pass, inadequate			√	√
3. Feedback				
3.1 Issuing feedback reports to schools	√	√	√	√
3.2 Provide advice schools regarding the measures should be taken and the deadline for improvement of existing issues at school	√		√	
5. The feedback covers general introduction of inspection performance, characteristics of school development, weaknesses and requirement of improvement. All the advice is evidence-based so as to strengthen feasibility.	√			
4. Rewards/Sanctions				
4.1 School				
a. Outstanding schools are selected to be awarded an honorary title.	√		√	
b. Schools which fail in school inspection will be re-inspected.		√		
4.2 Leaders				
a. School leaders' evaluation is based on inspection results. For schools which failed in re-inspection, school leaders will be discharged.			√	
4.3 Inspection Report				
a. The inspectorates of department should publish inspection reports regularly.	√	√	√	

Note: JS=Jiangsu, JL=Jilin, S=Shanxi, G=Guizhou; √= the indicator shown in the table is mentioned explicitly in one of the provincial inspection documents. • = different focuses of each procedure between four provinces.

Source: **Jiangsu, E. I. O. (2012).** *School Inspection Evaluation Measures of Quality Education for Ordinary Primary and Middle School*. Jiangsu: Education Inspectorates Office of Jiangsu Province; **Jilin, E. I. O. (2012).** *School Inspection Evaluation Measures of Quality Education for Ordinary Primary and Middle School*. Jilin: Education Inspectorates Office of Jilin Province; **Shannxi, E. I. O. (2012).** *School Inspection Evaluation Measures of Quality Education for Ordinary Primary and Middle School*. Shannxi: Education Inspectorates Office of Shannxi Province; **Guizhou, E. I. O. (2007)**. *Inspection Indicators System of Education Quality for Primary and Secondary School in Guizhou*. Guizhou: Educational Inspection Office of Guizhou.

JS, JL and S require schools to report self-evaluation results to local inspectorates every year and inspect schools once every three years. However, G recommended inspecting schools once every two years. This different frequency of school inspection is probably arranged based on the needs of the school (Whitby, 2010). Before school inspection, three provinces will inform schools in advance about the schedule of school inspection. With respect to the methods employed in the practice of school inspection, school leaders' reports, surveys, inspection of school documents, random classroom observations, schoolyard observations, panel interviews, requests for advice from parents and students, and individual interviews are commonly approved by all four provinces. Next, S and G use a four-point grading scale to make judgements on school performance, but JS does not require specific inspection standards. Instead, it delegates the power to all city inspectorates to formulate detailed

standards based on their contexts, which provides a chance for new standards to undergo a process of piloting and validation facilitated by stakeholders to ensure that the evaluation systems are practical and useful (Amsterdam et al., 2003). Although all provinces provide schools with feedback after inspection, only JS elaborates upon the content of the feedback given, suggesting evidence-based advice and responses based on the weaknesses and characteristics of schools; these stipulations for feedback ensure inspection quality and motivate improvement (Hattie & Timperley, 2007). Finally, the four provinces take diverse measures to reward and punish schools. JS and S reward outstanding schools, and JS, JL, and S publish school inspection performance reports to the public. JL indicates that schools which fail in the inspection should be re-inspected and S adds that school leaders who are responsible for improving school performance after school inspection may be discharged by the education authorities if the schools fail again in re-inspection. Although underperforming schools which receive formal sanctions are more responsive to school inspection results in contrast with simply grading schools and publishing school results to the public (Ehren et al., 2013), discharging a school leader is not equivalent to the fundamental schooling improvement. Instead, schools might attach more importance to improvement of some particular elements in the schooling process in order to deal with school inspection, which will do harm for realising underlying and long-term education targets, despite rapid improvement (Elmore & Fuhrman, 2001).

In summary, inspection procedures adopted by the four provinces are approximately consistent, but some differences also exist. Despite diverse inspection procedures employed by different inspection systems which are underpinned by the particular contextual culture, the procedures need to be defined clearly and aligned to the fundamental purpose of school inspection in order to ensure that schools take school inspection results seriously. The effectiveness of school inspection procedures can be judged based on feedback from the school and stakeholders' experience with school inspection processes (OECD, 2013a). In this research, participants, including inspectors and school practitioners who are familiar with inspection processes, gave feedback which was investigated to validate the importance of school inspection procedures to demonstrate education quality and improve the effectiveness of those procedures in improving education quality.

3.4.5 School Inspection Framework in Shandong province

3.4.5.1 The Context of Shandong province and Q city

Shandong Province is located in the eastern area of China, administering 17 cities and 137 counties. It is one of 12 seaside provinces in China surrounded by the Huanghai Sea and the Bohai Sea. In 2016, as a primary agricultural and industrial province, the GDP (Gross Domestic Product) in Shandong province was ranked the third among 31 provinces, accounting for 9% of economic aggregate over the country (NP, 2016). In total, as of 2017, there were 12,706 compulsory education schools with 10.38 million students and 697,800 professional teachers in the system of compulsory education. In addition, there were 737,600 students from rural migrant worker families (7% of the enrolled student population) (PGSP, 2018). Given that little statistical data can be found related to education quality, *Student Education Business Fees on Average in 2017* (MOE & State Satisitc Bureau, 2018) in relation to the educational inputs contributing to the quality of compulsory education can indirectly reflect educational quality. Shandong province was only ranked 15th among 31 provinces (see Appendix IV), despite being one of the top three most affluent provinces in China. This evidence indicates that the educational development level does not align with the economic developmental level in Shandong province.

Q city is a vice-provincial city located on the north coastline of China, administrating ten districts and counties which cover both urban and rural areas. Q city is one of the most developed cities in China; its GDP in 2017 was ranked the 12th among all cities in China and first among 17 cities of Shandong province (Sohu, 2018). As of 2016, there were 743 primary schools with 0.55 million students and 22,794 full-time teachers, and 237 junior high schools with 0.24 million students and 35,541 full-time teachers in compulsory education (MOE, 2016). The enrolment rate for compulsory education and senior high school was 100% and 98%, respectively. The public finance expenditure in education arrived at 25 billion, occupying 18.54% of the total expenditure of Q city in 2016. Since 2012, 760 primary and junior high schools have been built and reconstructed, and 97.8% primary and junior high schools met the criteria of modern schools of Q city (Q City, 2018). In 2015, all ten districts of Q city had passed school inspectorates' evaluations of balanced improvements to school infrastructure and distribution of educational resources among schools within one region (Yu et al., 2018), and in 2016, was ranked the 1st among 19 key large cities in satisfying education equity in China (Yang et al., 2016). This indicates that the discrepancy of educational inputs across the rural and urban areas in Q city is not prominent, but other underlying factors of schooling processes might be highlighted and generated to contribute to variability in education quality. Whether the city addresses the issue of accepting school-aged children of

migrant workers to enrol in compulsory education schools in urban area as equivalent to urban local students or not is also critical to examine the level of balanced development of education in a region. Comparing to small cities, key large cities are supposed to accommodate more migrant workers and their children to work and study. In this case, Q city was ranked the second among 19 big and key cities in China in 2015 in the degree of satisfaction in arranging for the children of migrant workers to receive compulsory education (Zhang & Chen, 2017).

As the only national-level experimental area for comprehensive education reform in Shandong province, Q city has been dedicated to improving the quality of compulsory education by reforming classroom teaching and improving scientific evaluation of education. Consequently, the experience with compulsory education reforms in Q city has been promoted and applied in other regions 19 times by the MOE since 2012 (Yu et al., 2018). Recently, a mechanism which aims to improve education quality was established and applied in curriculum and classroom teaching reform in primary and junior high schools. One mechanism, for instance, involved the creation of cross-grade optional courses and homework assignments according to level, both of which were carried out to satisfy students' different learning needs. Additionally, the effectiveness of the school evaluation system was enhanced by inviting stakeholders, including teaching staff, students, parents, and peers, to participate in school evaluation. Thus, these stakeholders' perspectives contribute to the evidence base around school inspection, which explicitly reflects the existing issues in the process of school development (Lin, 2015).

3.4.5.2 School Inspection Framework of Shandong province

In line with the requirements of MOE (2011b), the educational inspectorates of Shandong province formulated and issued provincial indicator systems of school inspection for primary schools, junior high schools, and senior high schools in local cities or districts. In China, local educational inspection policies are crucial components in constructing the educational inspection policy system. As noted above, the formulation and implementation of educational inspection policy at the local level is based on the preliminary educational inspection policy system at the state level (Runyong, 2007). Due to the lack of unified national school inspection criteria and standards, guidance from the national inspectorates is limited. Therefore, running the school inspection system depends mainly on the local school inspectorates, and most of the provinces need to formulate province-based school inspection standards and methods by considering the characteristics of the regional economy and education development. According to Regulations of Educational Inspection issued by the

government of Shandong province, the provincial educational inspection office is mainly responsible for implementing national policies and legislative regulations, drafting plans of school inspection, and organising and coordinating evaluation and inspection in all types of schools (Wenhao, 1997).

On January 5th, 2013, Education Department of Shandong Province issued *Plan for Implementation of School Inspection of Quality Education in Ordinary Primary and Secondary School* (2013-2018), regulating that provincial inspectorates should inspect schools once every three years (Shandong Province, 2013). In compliance with the directive of MOE (2012b), the city-level and district inspectorates respectively are required to randomly inspect each school no less than once within three months and no less than once per month. Shandong provincial inspectorates aimed to promote schools' compliance with legal regulations, students' development, and schools' development, which is aligned with the purposes of national inspectorates. In particular, provincial inspectorates seek to adapt to the uniqueness of a school's individual trajectory of development by making use of the available educational resources in different regional contexts while still adhering to legal regulations (Shandong Province, 2013). It appears that the educational inspectorates of Shandong province attached more importance to school improvement rather than accountability to promote students' and schools' development. Additionally, a number of educators from other provinces in China spoke highly of reform in Shandong province where schools were required to operate based on legal regulations so as to guarantee education quality (Yongjina, 2009). For instance, schools which fail to meet legal regulations are not qualified to compete with other schools for the "model school", as a reward for high-quality schools.

Accordingly, school inspection criteria were formulated to realise provincial school inspection purposes. The school inspection framework of Shandong province encompasses six aspects: school vision, system construction, school behaviour, moral education, teaching, and school outcomes (Shandong Province, 2013). The layout of the school inspection criteria is shown in the table 3.5 below; there, the key areas recommended by the national school inspection framework are covered. Dimension A1 "vision of school" and A6 "school outcome" are both indicated in the national framework. Dimension A2 "system construction" is in alignment with dimension 2 "school leadership and management" in the national framework. Dimension A3 "operation of school" is in line with dimension 3 "school regulation and legal aspects" from the national framework regarding compliance with legal regulations. Dimension A4 "moral education" is consistent with dimension 4 "moral education and activities" from the national framework. Dimension A5 "teaching" is

equivalent to dimension 5 “classroom teaching” from the national framework. The relationship between the national inspection framework and the international conceptual framework is elaborated in section 3.4.5.2.

Table 3.5: School Inspection Indicator System of Quality Education for Junior High Schools from Shandong Province

A1. Vision of School	B1 Education Concept B2 Development and Planning
A2. System Construction	B3 Post Responsibility System B4 Self-evaluation System B5 Evaluation System B6 Safety System B7 Hygiene System
A3. Operation of School	B8 Schools are managed in compliance with legal regulations B9 Curriculum setting B10 Student enrolment B11 School schedule for learning B12 Teacher management B13 Teaching material management B14 Exam management B15 Homework management B16 Financial management
A4. Moral Education	B9 Moral Education System B10 Behaviour and Habit B11 Activities of Moral Education B12 Social Network of Moral Education
A5. Teaching	B13 Curriculum Implementation B14 Teaching Routines B15 Teaching Research B16 Teaching Facilities
A6. School Outcome	B17 Student Development B18 Teacher Development B19 School Development B20 Demonstration Effect

Note: Source: **Shandong Province, E. D. (2013).** *School Inspection Evaluation Measures of Quality Education for Ordinary Primary and Middle School*. Shandong Education Department of Shandong Province.

3.4.5.3 Third-party Evaluation Standards

Third-party evaluation body as an external evaluation organisation is independent of the educational administration department in that related social connections within the educational system are cut down so that impartiality of evaluation processes may be ensured. This type of evaluation approach is meant to avoid measurements of educational quality that are implemented by people from the internal educational system who pay excess attention to students’ academic achievements while overlooking other equally important components of education quality (Shuncheng & Yiqing, 2015). In the process of evaluation, the third-party organisations use professional evaluation tools and self-created standards and are monitored by local educational administrative departments to guarantee the objective outcomes of evaluation. Thus, the involvement of the third-party evaluation could be beneficial for promoting objective and scientific evaluation of processes and outcomes.

Historically in China, third-party evaluation has mainly been employed by universities and colleges to evaluate the quality of teaching and research in higher education. In 2002, the MOE published a policy entitled *Actively Promoting Reform of Evaluation and Examination System in Primary and Secondary School*. This policy firstly presented the targets of exploring the participants, the content, and the approach to third-party evaluation. Subsequently, in 2010 *The Outline* requested that universities and colleges invite government agencies, schools, parents, and the broader social community to join the evaluation programme for education quality (SC, 2010). In January 2014, the MOE issued *Main Working Points* and clarified that external third-party organisations should participate in the evaluation of educational modernisation (MOE, 2014). In 2015, the Educational Department of Shandong Province began to regulate third-party bodies that are recognised by the government, including colleges and universities, scientific research institutions, professional companies, and social organisations. The educational authorities at each level recruit the third-party body to carry out educational evaluations (Shandong, 2016). Involving third-party organisations in school evaluation may be conducive to enhance the reliability of evaluation in case the administrative department does not evaluate schools objectively and effectively within the same system. However, it is still essential for educational authorities to lead the third-party organisations to develop on the right track and do so by formulating a general outline of school evaluation based on legal regulations (Feng & Liu, 2016).

In 2015, in order to promote school quality, the inspectorates of Q city published *Developmental Evaluation Indicator System of School Quality of Primary and Secondary School* with a focus on student development (Q City, 2015). Additionally, education and teaching, teaching body, organisation and management, and school characteristics were included in the evaluation framework. Based on this framework, the Basic Education Evaluation Project Team from Tsinghua University chose the most suitable approach and method of data analysis based on school contexts to conduct a three-year developmental evaluation project about school development and education quality in eight primary and junior high schools in Q city. The final evaluation report ended up with suggestions for improving teacher quality, emphasising students' habits, psychological health, and overall development, and strengthening guidance of students' learning methods and thinking abilities (Zeng, 2016).

The main points of the evaluation indicator system for junior high school are shown in the table 3.6 below. Dimension A "student development" related to student outcome is subordinated to dimension "school outcome" in the Shandong provincial framework and

national framework. Dimension B "education and teaching" is divided into moral education and teaching. Moral education and teaching indicated as dimension A4 and A5 in Shandong provincial framework are consistent with dimension 4 "moral education and activity" and dimension 5 "classroom teaching" respectively in the national framework. Dimension C "teaching body" is categorised into professional development and teacher evaluation and incentives. Professional development is in line with B15 "teaching research", subordinated to dimension "teaching", and teacher evaluation and incentives are reflected in B5 evaluation system subordinated to dimension A3 "operation of school" in the Shandong provincial framework. Dimension D "organisation and management" incorporates dimension A2 "system construction" and A3 "operation of school" in the Shandong provincial framework. Dimension E "school characteristics" goes in accordance with B19 "school development" and B20 "demonstration effect". Both B19 and B20 are subordinated to the dimension "school outcome" in Shandong provincial framework and the national framework. The relationship between Shandong provincial framework and national inspection framework is shown in section 3.4.5.2.

Table 3.6: Developmental Evaluation Indicator System of School Quality for Junior High Schools from Q City

A. Student Development	A1. Physical and Mental Development A2. Morality and Behaviour A3. Academic Achievement A4. Abilities and Practical Techniques
B. Education and Teaching	B1. Moral Education B2. Teaching
C. Teaching Body	C1. Professional Development C2. Teacher Evaluation and Incentive
D. Organisation and Management	D1. Compliance with legal regulations D2. Modern School System D3. Safety and Support D4. School Culture D5. School Resource D6. Family Cooperation D7. Self-evaluation and Improvement
E. School Characteristics	E1. Planning E2. Implementation E3. Effects on Development

Note: Source: **Q City, Q. E. B. (2015).** *Developmental Evaluation Indicator System of School Quality of Primary and Secondary School* Qingdao: Q City Educational Inspectorates Office.

3.4.5.4 Strengths and Weaknesses of School Inspection Framework in Shandong Province

Comparing the inspection indicators of Shandong province against the national and provincial inspection framework, as well as international theories (see chapter 2), the weaknesses (missing indicators of Shandong province) in school inspection framework of Shandong province lie in the following aspects: inclusive environment, students' social competencies and emotional well-being, professional leadership and democrat management, teachers' motivation and structured classroom teaching; the strengths (missing indicators in

other international and local literature) in Shandong province lie in the aspects of students' physical well-being, teacher and student evaluation, and students' activity in learning, etc (see table 3.7). These advantageous foci and missing indicators of education quality in Shandong province highlight the need for a new research inquiry regarding the degree of importance of each indicator (from Shandong province or other sources) to clarify and demonstrate the aspects of education quality and inform the survey instrument for data collection (see section 4.4.1.1). Stakeholders' perceptions in addressing this new research enquiry would accommodate the context of Shandong province.

Table 3.7: Key Strengths and Weaknesses in School Inspection Indicators of Shandong province in Comparison with International Literature and Chinese School Inspection Frameworks

School Inspection Indicator	Weaknesses	Strengths
Compliance with legal regulations	1. No paid tutoring centre run by the school 2. Rural migrant children's access to urban school	1. School conditions for students' physical well-being and safety
Leadership and school management	1. Professional leadership	1. Teachers' comprehensive evaluation 2. Students' formative evaluation 3. School improves education quality based on inspection feedback 4. Usage of teaching resources in curriculum 5. All school members' involvement in school self-evaluation
School environment	1. Inclusive environment 2. No in-school violence 3. Physical environment	1. Positive learning atmosphere
Teaching and Learning	1. Equal opportunities to learn 2. Structured teaching 3. Teachers' Motivation 4. Morality as a critical standard for recruitment of teachers 5. Teachers' expectation for student learning 6. Paper publication 7. Optional courses	1. Activities of civic education 2. Cooperative learning using information and technology 3. Participating in activities of community 4. Student self-evaluation 5. Explorative homework 6. Teaching research activities 7. Teachers' abilities to develop school-based curriculum 8. Curriculum resources
Students' outcome	1. Students' life skills • Students' critical thinking • Social competences • Student emotional well-being • Student overall well-being • Student value-added academic achievement • Satisfactory enrolment rates of entering the senior high school	

3.4.5.5 School Inspection Procedure in Shandong province

In general, the procedures of school inspection employed by Shandong Province (2013) are in line with those employed by the other four provincial inspectorates in China and those applied in the international contexts. Nonetheless, the quality of school inspection and the effectiveness of implementing these inspection procedures might be different due to the diversity of provincial contexts. Moreover, the procedures applied to different contexts could also have different effects in demonstrating and improving education quality. Hence, new

research inquiries concerning the importance of each procedure (from Shandong province and other sources) to demonstrate and improve education quality are brought up. The strengths and weaknesses in the process of school inspection recommended by stakeholders could better accommodate the context of Shandong province and inform the survey instrument for data collection (see more details in Chapter 4).

3.4.6 Impact of School Inspection

It is difficult to measure the impact of school inspection when the quality of available data cannot be guaranteed. Several policy measures are issued concurrently in one educational system, which might make it challenging for the researcher to separate and identify the impact of one policy initiative. Moreover, the difficulty of finding a control group also intensifies this situation facing researchers (Faubert, 2009). Similar circumstances have taken place in the process of school inspection in China. More importantly, the school inspection system in China is still developing, and the effects of school inspection on improving education quality have not yet been completely determined. Thus, until this point, studies of the school inspection system were dominated by literature review research which occupies nearly 90% of all related studies, with only a few empirical studies pertinent to the impact of inspection implementation in the context of China (Li et al., 2016). Therefore, the further empirical study of the consequences of the school inspection implementation in relation to inspection quality is needed.

Lee et al. (2008) initiated the research on Shanghai's school inspection system in 2006, in which more than 100 schools in Shanghai were investigated. It revealed that the quality of school inspection implementation was unsatisfactory, and the most unsatisfactory aspect lay in that teachers and principals were too stressed out to cope with the various school visits and checks. Teachers needed to perform more interactively with students during school inspection than during normal classes in order to meet the requirements of external inspection. This outcome was indicated by Inge F and Janssens. (2007) and Baker (1994), who claimed that feedback and guidance provided by the external inspectors for school improvement did not accommodate school context, which resulted in an inconsistency of expectations between government and schools. In other words, governmental requirements or standards set for school performance tended to go beyond the real abilities of teachers and principals. Recently, Ning (2015) investigated headteachers' satisfaction towards the school inspection system in China's Hubei province. It was found that 55% of headteachers thought school inspection had little impact on school development, and the major influence of school inspection was

reflected in the improvement of school infrastructure. Furthermore, school inspectors' feedback was not deemed to be helpful because the data concerning school quality was collected mainly through school document inspection rather than through on-site observation of classroom teaching, a practice which is more practical to know teachers' teaching quality and students' learning. The two studies mentioned above were conducted in one province or a direct-municipality of China where more negative impact than positive impact was identified in the process of school inspection. In addition, Li et al. (2016) found that the school inspection performance in the urban area was reported to be significantly higher than that in the rural area, with urban schools demonstrating better performance in school administrative management, improvement of teaching quality and balanced development of compulsory education. Thus, it is necessary to explore the potential strengths and weaknesses in the process of school inspection and uncover the underlying factors that might affect the quality of school inspection and education quality in China through investigating these issues in one city in Shandong province.

3.5 Chapter Conclusion

This chapter began by introducing compulsory education reform in China by highlighting key events, such as fiscal and administrative decentralisation reform which sought to address inequity and unbalanced educational development across regions. The quality-oriented curriculum reform also signalled a fundamental change in curriculum and classroom teaching practice, which had a profound and long-term impact on the understanding of education quality and the construction of the school inspection system. The former reform clarified the administrative and fiscal relationship between the central government, provincial departments, and schools and indicated the developmental trend of enhancing the autonomy of local departments and schools. Although decentralisation leaves enough space and flexibility for the autonomous development of each province, it also arguably, in turn, aggravates the imbalanced development of education quality across different regions. Thus, realizing educational equity becomes a key focus of compulsory educational reform and school inspection framework. The gap in education quality between developed and less-developed areas and advantaged and disadvantaged students (e.g. students from migrant-worker family) cannot be addressed solely by increasing school input. What is equally important is improving the schooling process. The innovations placed the emphasis on the schooling processes concerning students' learning, classroom teaching, teachers' quality, school leadership, school management, and equity. It sets the foundation for formulating school

inspection framework in China by identifying the focus of education quality in the schooling practice, which is in line with the effective factors identified in the international literature (see Chapter 2).

The last section introduced the development of the school inspection system in China and identified the week influence of school inspection on improving education quality. It also revealed a lack of research concerning the impact of school inspection on education quality. The national inspectorates formulated the guidelines for the school inspection framework which are used to provide guidance for each province to issue sub-criteria of school inspections based on their regional contexts. A review of the national and provincial school inspection documents and the indicators and approach/procedures employed by the national and local inspectorates, as well as the previous evidence regarding consequences emerging from the process of school inspection serves to illustrate the characteristics of the school inspection system and the contextual issues around school inspection practice in China. Finally, this chapter discussed and provided the rationale for the research inquiries to be addressed in this research.

In summary, through comparing the school inspection indicators and procedures employed by Shandong province to national and international literature, the strengths and weaknesses in the school inspection framework of Shandong province were identified to inform the survey instrument for the forthcoming data collection (see Chapter 4). Thus, the research inquiries regarding to what extent school inspection indicators and procedures are important to demonstrate and improve education quality in Shandong province were generated. Moreover, in order to address the gap in the research on the impact of school inspection on education quality in the Chinese context, the research inquiries concerning the strengths and weaknesses of school inspection processes to monitor education quality, along with the policy context of schooling and school inspection that might affect education quality, were presented. Additionally, as was stated in section 3.3.2, both school contexts (e.g. urban/rural areas) and participants' professional titles (e.g. senior/junior teachers) were recognised to be influential on student outcomes. Therefore, the research inquiries regarding the differences in perceptions of participants from urban/rural areas and participant with senior/junior professional titles were generated. The following chapter will present the overall research design by comprehensively considering methods and procedures employed to collect and analyse data according to the research inquiries presented in Chapter 2 and 3.

Chapter 4 Research Design and Methodology

4.1 Introduction

This chapter presents the overall research design and methodology employed to address the study aims and research questions. An explanatory sequential mixed methods design has been developed to explain initial quantitative outcomes by employing a qualitative strand (Cresswell et al., 2003). At the beginning of this chapter, the research aims and research questions to be addressed in this research are reiterated. Next, pragmatism and post-positivism as the key philosophical standpoints underpinning the research design are introduced. The main aspects to be discussed are the underlying rationale for using this philosophical perspective to fundamentally support the research design and how each research procedure reflects this perspective. Following this general guidance regarding the research design, the details of the separate quantitative and qualitative strands are presented, which include the rationale for collecting data through a questionnaire and interviews, the sampling procedure for the schools and participants involved in the survey and interviews, construction of the survey and interview instrument, the piloting of the instrument, and finally the process of collecting and analysing the quantitative and qualitative data sets. Afterward, the ethical issues related to each research procedure are discussed and the potential limitations of the methodology. Finally, the researcher reflects on the issues of researcher trustworthiness and validity.

4.2 Research Aims and Research Questions

The aim of this study is to explore the strengths, weaknesses and overall quality of school inspection policies and practice in China and examine in one city region stakeholder perceptions of inspection purposes, content, processes, outcomes, and context, as well as the potential to improve inspection practice and compulsory education quality in China. More specifically, this study seeks to address the following research questions:

Research Question 1: What are stakeholder perceptions on the concept of educational quality and the purpose of school inspection? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

Research Question 2: What are stakeholder perceptions on the importance of different school inspection indicators in order to demonstrate education quality? Are there any differences in

the views of participants from the urban area and rural area? And between junior and senior teachers?

Research Question 3: What are stakeholder perceptions on the importance of different approaches and procedures used in school inspection in order to demonstrate and improve education quality? Are there any differences in the views of participants from the urban area and rural area? And between junior and senior teachers?

Research Question 4: What are stakeholder perceptions on the strengths and weaknesses of current processes of school inspection to monitor educational quality?

Research Question 5: What are stakeholder perceptions on how the inspection system could be improved?

Research Question 6: What are stakeholder perceptions on the policy context of education and the school inspection system that influence education quality?

4.3 Philosophical Background

Since a single paradigm cannot be applied to all the diverse aspects of mixed methods (MM) design, multiple paradigms could be employed to decide which paradigms are most appropriate for a particular mixed methods research design (Teddlie & Tashakkori, 2009).

4.3.1 Pragmatism

In order to address the research questions outlined above, a range of quantitative and qualitative methods for data collection and analysis have been selected to conduct this research within a pragmatic paradigm. Philosophical pragmatism intended to address paradigm debates between positivism and constructivism, given the strengths and weaknesses in both approaches (Tashakkori & Teddlie, 1998). The aim of pragmatism is to take in strengths and minimize the disadvantages of quantitative and qualitative research rather than replacing either of them (Johnson & Onwuegbuzie, 2004). Pragmatists believe that there is no completely unified world, which allows the mixed-method researchers to employ different approaches to collect and analyse data instead of using a single approach (Creswell, 2014). Based on the set of historical debates, Tashakkori and Teddlie (2003) connected pragmatism with mixed methods by arguing that qualitative and quantitative research methods could be compatibly applied in one research study, and the selection of which method or worldview to employ would be determined by the research question. This research is philosophically situated as pragmatism since the researcher collected data depending on a “what works”

approach to address research questions (Creswell & Clark, 2011). Thus, the researcher can choose the methods that best accommodate the objectives and needs of the research.

Furthermore, pragmatists decide what to research which is subject to what is important in alignment with their individual value system (Teddlie & Tashakkori, 2009). For this research, pragmatism is appropriate to explain the application of mixed methods because, based on the characteristics of this research, reliance on only one research method cannot provide sufficiently rich and detailed evidence to answer all the research questions. Both survey and individual interviews were conducted by combining methods used to collect and analyse qualitative and quantitative data, and the findings were interpreted by merging qualitative and quantitative results in the two different phases of the project. Thus, it would be best to initially adopt an all-encompassing worldview that acts as an "umbrella" paradigm and then different paradigms will be mixed to inform this study. Therefore, the researcher was enabled to use a pluralistic stance for collecting different types of data in order to get the best understanding of the research questions, with the quantitative results being explained and complemented by the qualitative outcomes (Creswell & Clark, 2011).

4.3.2 Post-positivism

This research design also reflects a post-positivist worldview which embraces pragmatism. Both post-positivists and pragmatists support the concept that an external reality exists which is independent of our mind (Cherryholmes, 1992, p. 14). However, post-positivism claimed that the absolutely true knowledge does not exist, and all the evidence is imperfect. Thus, in the process of the research, some arguments are replaced by other, better warranted arguments (Phillips & Burbules, 2000). Pragmatists chose a particular explanation by stating that there is always a better way to produce the anticipated or desired outcomes (Cherryholmes, 1992). In other words, both quantitative methods and qualitative methods can be employed in order to obtain the best understanding of a research question. Post-positivists believed that knowledge is developed by the evidence, data, and rationale which are acquired through practical investigation and measurement (Phillips & Burbules, 2000). Also, the research findings seek to reflect the causes which impact the outcomes (Creswell, 2014). Regarding this research, for instance, knowledge in form of theories, literature, and documents is reviewed and subsequently examined further through an empirical study involving a questionnaire survey and statistical analysis in practice. In this way, stakeholders' views about the most important factors which affect education quality in relation to school inspection quality will be identified in order to find a better way to improve education quality

in China. Informed by the worldview of post-positivism, this research begins with testing the specific variables and empirical measures that were framed in prior theories. Next, individual interviews were conducted in the following phase to seek explanation and clarification of the survey results by providing more context-based information. During the process of interview, multiple meanings from participants may build up a comprehension which is richer and deeper than what is available from the survey, with the intension of generating a theory or pattern of responses that might be used to explain the survey results (Creswell & Clark, 2011).

4.4 Research Design and Methods

Mixed methods are employed in this study, as applying quantitative and qualitative approaches in combination supplies a better understanding of research questions in comparison with employing either of them alone (Cresswell & Plano Clarks, 2007). Research using mixed methods is underpinned by philosophical assumptions and methods of inquiry. Mixed methods performed by pragmatists are fruitful in that pragmatism provides one "immediate and useful middle position philosophically and methodologically", and mixed methods facilitate the researcher to better address research questions in a practical and result-oriented way (Onwuegbuzie & Johnson, 2004, p. 17). The rationale to employ mixed methods also derives from the idea that it is a good means to neutralize the disadvantages of either qualitative or quantitative data, since all methods and data have deficiency (Creswell, 2014). In other words, mixed methods research observes the fundamental principle that "methods should be mixed in a way that has complementary strengths and non-overlapping weaknesses" (Johnson & Turner, 2003, p. 299). More specifically, that the researcher pays more attention to examining numerous individuals might diminish the deep understanding of one individual. In this case, one data source could be insufficient to fully address the overall research objectives, thus requiring a second method to be adopted to strengthen the primary method. (Creswell & Clark, 2011). Additionally, according to Bryman (2006), the alliance of qualitative research that provides contextual understanding coupled with the broader relationship among variables revealed through a survey contributes to the credibility of this research.

Thus, the research seeks to quantify and aggregate the responses and characteristics of the questionnaires with others in the survey sample, so that the patterns or relationships between them can be measured through statistical analysis (May, 1997). One of the advantages of the questionnaire is cost-effectiveness in that the researcher is able to collect a large amount of data within a short period and the process of analysing data can also be very fast and

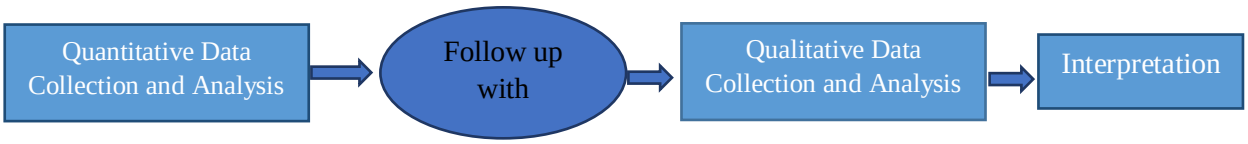
relatively straightforward by using software (e.g. SPSS) (Gillham, 2008). Moreover, a well-structured questionnaire could reduce the bias yielded from the interviewer effect so as to enhance the consistency and reliability of the research results (Bryman, 2012). In contrast an in-depth interview is seen as a good way to explore what people think or feel about events which have happened in the past and those yet to happen (Darlington & Scott, 2002). Furthermore, participants possess 'the capacity to provide full and sensitive descriptions of the experience under investigation' (Polkinghorne, 1989, p. 47). In an in-depth interview, participants can present a clear outline of the inspection process, along with their genuine feeling and thinking about school inspection itself and the process of preparing for a school inspection. Since the survey was restricted to items identified in the previous research, the qualitative data collected in the second phase is needed to explain the significant (or non-significant) or surprising quantitative results (Bradley et al., 2009; Morse, 1991) emerging in the first phase. Richer information is generated through an in-depth interview where interviewees can provide more details of inspection practices and their impact during the inspection process. Additionally, any misunderstanding about questions on the part of the interviewer or the interviewee can be presented immediately, which is impossible for questionnaire or tests when they are completed. Therefore, the conformity between participants who describe their experience quantitatively through the standardised questionnaires and participants who interpret their life subjectively through responding to open-ended questions in an interview could make the inferences from the research much stronger (Teddlie & Tashakkori, 2009).

In this research, an explanatory sequential design aiming to "explain initial quantitative outcomes by employing a qualitative strand" (Cresswell et al., 2003, p. 71) was employed. The decision to choose mixed methods as the appropriate design was made on account of four aspects, including "the level of interaction between the strands, the relative priority of the strands, the timing of the strands, and the procedures for mixing the strands" (Creswell & Clark, 2011, p. 64). First, how the quantitative and qualitative strand interact with each other is considered for this research. More specifically, a quantitative strand was designed and conducted in the first phase, and a qualitative strand was developed partially based on the specific quantitative results and partially on deeper questioning around inspection. Some of the quantitative results would potentially need an additional explanation from qualitative data. Second, this research gives almost equal emphasis on quantitative methods and qualitative methods. Third, a sequential timing was fitting for this research in that quantitative data collection (survey) and analysis (statistical analysis) were implemented before qualitative

data collection (interview) and analysis (thematic analysis). Finally, results from quantitative and qualitative data analysis were synthesised. To what extent and how the quantitative results can be explained and enriched by the qualitative results would be interpreted and analysed as a whole in response to the research purpose (Creswell & Clark, 2011). Therefore, an explanatory sequential design of mixed methods was employed to inform this research, as shown in Figure 4.1.

This research intends to explore stakeholder participants' perceptions of the concept of education quality, purposes, indicators, and procedures of school inspection in Shandong province and the strengths and weaknesses in the process of school inspection, as well as contextual issues that might affect current school inspection practices and compulsory education quality in China. First, a conceptual map of previous approaches to school inspection was constructed to inform survey item design, depending on the previous international, national, and local theories and literature related to educational quality and school inspection systems (see section 4.4.1.1). Next, a survey was conducted to answer RQ1 to RQ3 to obtain representative responses from participants that can be analysed by employing methods of statistical analysis, such as descriptive analysis, repeat-measures one-way ANOVA, two-way ANOVA, and one-way ANOVA with SPSS (see section 4.4.1.5). Following this, a qualitative data collection instrument was developed based on the research questions and the results of statistical analysis of the survey. Third, the semi-structured individual interviews were carried out and the qualitative survey data collected were analysed by employing the thematic analysis method to address RQ1, 4, 5, and 6. The qualitative findings expanded on quantitative evidence addressing RQ1-RQ3, providing richer and in-depth context-based evidence to complement and extend evidence from the survey data and explain the quantitative results.

Figure 4.1: The Explanatory Sequential Design (Creswell & Clark, 2011)



4.4.1 Quantitative Survey

"Questionnaires are any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting among existing answers" (Brown, 2001, p. 6). The typical questionnaire is highly structured in that most items require either specific information or provide participants with

various response options to choose from. Thus, questionnaire data are better analysed using a method of statistical analysis (Dornyei & Taguchi, 2010).

4.4.1.1 Survey Instrument Design

The questionnaire survey was designed to address research questions RQ1 to RQ3. The items were derived from the inspection analysis framework that was developed by reviewing the previous literature, including theories around educational quality, school effectiveness and school inspection, the current international inspection documents made by EU and OECD, related surveys, and national and provincial inspection documents from the Chinese context, as well as some related research in various countries (see Chapter 2). The questionnaire aimed to provide a comprehensive typology of the purposes, indicators and procedures that potentially inform a school inspection system by reviewing the varied theories and inspection frameworks in both the international and the Chinese contexts. Then, inspection policy documents issued by the inspectorates of Shandong provinces were compared with the conceptual framework (see section 3.4.5). Similar items were merged, and different items were retained to contribute the survey items. Based on participants' perspectives on each item, the resulting survey informed by these items could shed a light on how to improve the current school inspection system of Shandong province. The complete questionnaire and the source of each item can be found in Appendix I and II.

Purpose: The survey questions related to inspection purpose were presented in section two, using the working head "Purposes of External Inspection in This Province". The common purposes identified in previous literature were listed to obtain participants' opinions about which purpose were most relevant could best accommodate school inspection in practice.

Criteria content: The survey questions regarding inspection criteria were presented in section three, using the working head "External School Inspection Content". The survey items were merged into four dimensions, which included compliance with legal regulations, organisation, and management in the school (e.g. school leadership, school management, and school environment), teaching and learning (e.g. classroom teaching, teachers' professional development, and students' learning), and outcome. This approach and the content of the items were derived from the previous literature which incorporates the full range of potential school inspection indicators identified across five provincial contexts in China, as well as in the international contexts. Also, relevant questionnaire items on inspection criteria/content that had been used in previous research have also informed the design of survey questions on these themes, such as items related to classroom teaching and teachers' professional

development employed by TALIS (OECD, 2013a) and the project *Improving teacher development and educational quality in China* (Thomas, 2014). The design of questions used to measure education quality were similarly informed by the questionnaire survey *Teachers' Views on Evaluating Quality in Education* (European Science Foundation, 2008).

Procedure: The survey questions about inspection procedures were presented in section four with the working head "External School Inspection Procedures" in order to obtain participants' views on inspection processes and approaches such as targets setting, school self-evaluation, class observation, feedback, and sanctions and rewards to demonstrate education quality. Questions regarding approaches used in school inspection were informed by the previous international literature regarding school inspection procedures (see section 2.4.3).

Consequences: The survey questions concerning the impact brought by the school inspection procedures/approaches on education quality were shown in section five. These questions seek to examine the positive and unintended consequences brought by school inspection procedures on improving education quality using the working head "Impacts of External School Inspection". Questions to measure school inspections' positive and unintended impact on education quality were developed based on the questionnaire *Impact of School Inspections on Teaching and Learning* (Ehren et al., 2014). (see section 2.4.3).

Demographic Information: In addition to the main body of questions related to school inspection, the survey also included questions concerning participants' demographic information, such as their school positions, gender, working time, and the highest level of education, as well as the region, type, and status of the institute which they are working for. These questions were placed in section one using the working heading of "Some Basic Information of Participants". One essential function of the survey was to make comparisons between different groups of participants, considering that such demographic factors may affect participants' perceptions or attitudes on the main body of survey questions (Sheatsley, 2013). In China, addressing widening gaps in education quality between rural and urban areas and impoverished and affluent areas is the biggest challenge (Zhou, 2017), which has resulted from the significant urban-rural disparities in terms of resource allocation, migrant children's access to schooling, and teacher quality (Du & Shen, 2010; Tao & Yuan, 2010). Thus, participants from rural schools might be more likely to give higher ratings to indicators regarding teacher quality in comparison with participants from urban schools, and the school with higher proportions of migrants might be more supportive of indicators concerning

learning opportunities in comparison with other schools (see section 3.3.2.4). Moreover, previous literature revealed that teachers' professional titles have an influence on student academic outcomes, motivation of work before and after promotion to a senior professional title, and abilities to learn new educational concept and pedagogy (Chu et al., 2015; Minglong, 2013; MOE, 2001). Thus, this research assumes that junior teachers might be have positive responses to innovations in educational and school inspection purpose, indicators, procedures, and impact of school inspection on schooling and education quality when compared with the responses of senior teachers (see section 3.3.2.2). In this research, perspectives of participants from urban and rural schools and with senior and junior professional titles are compared in terms of school inspection purpose, criteria content, procedures, and impact. The factual questions involved in this survey were to request participants' demographic information which was used to interpret the findings of the survey (Zoltan, 2002).

At the end of this survey, two open-ended questions were included in section five to address RQ4 and RQ5. The questions aimed to further explore participants' perceptions of the strengths and weaknesses of the provincial school inspection system and how to improve it by reducing the unintended impact and optimise the function of the school inspection system in China.

This survey comprises both closed-ended items and open-ended questions. The advantages of the closed-ended questions lie in that "their coding and tabulation is straightforward and leaves no room for rater subjectivity" (Dornyei & Taguchi, 2010). Furthermore, the closed-ended questions are sometimes called "objective" items which can be coded numerically so as to conduct statistical analysis but also analysed thematically. Likert-type scales, which are the most popular scaling technique, are applied in this questionnaire in order to obtain a measure of the participants' views on school inspection purposes, importance of school inspection indicators and procedures to demonstrate education quality, as well as validity and relevance of each statement regarding the intended and unintended impact of school inspection on education quality. In this questionnaire, five response category statements including, "strongly disagree, disagree, neither agree nor disagree, agree and strongly agree", or "the most important, very important, important, not important, and not important at all" are used. All the five scales were assigned a number for the purpose of scoring for the following statistical analysis stage (e.g. "Strongly agree" = 5, "Strongly disagree" =1; "The most important" =5, "Not important at all" =1). Practically, five response options are appropriate since more response options may lead participants to be confused about how to tell different levels of attitudes. Multiple-choice items were applied in this survey in order to request

participants' demographic information concerning gender, school position, professional title, and job title, the highest level of education, the subject of teaching, school location, and school status. This type of item used in the questionnaires requires participants to mark depending on one or more options from an exhaustive list of categories with an additional category of "other" followed by "please specify" as an open-ended question (Zoltan, 2002).

The questionnaire is not an effective way to collect exploratory qualitative data, given that the relatively short and superficial engagement of the participants restricted the "openness" of an open-ended question. There still exists merit in open-ended questions, for instance, since they give participants permission to express with freedom and provide more "richness" than a closed-ended question (Zoltan, 2002). Hence, a short-answer question was appropriate to finish this survey, since participants were motivated to provide a free-ranging and unexpected response rather than merely making a choice from among a group of prescribed answers. Given that the targeted participants are all from China, the questionnaire was drafted in Chinese.

4.4.1.2 Sample of Questionnaire

Before conducting this survey, a non-probability convenience sampling was employed since an unknown sampling size of participants meant that no ready-set sampling frame was available. Due to the limited scope of Ph.D. research, it was only possible to administer one quantitative survey through the questionnaire in one city Q in Shandong province. Q city was selected according to its top rank in education quality and educational equity in comparison with other areas within Shandong province and other key large cities nationwide. As the only national-level experimental area for comprehensive educational reform in Shandong province, the experience of educational reform from Q city has been applied extensively to other provinces and areas (see section 3.4.6.1). Thus, perspectives of participants from Q city are more likely to identify which factors embedded in the schooling processes and school inspection system of Shandong province can contribute to a high-quality educational system. Also, participants are expected to provide more context-based information regarding how school inspection is carried out and how it influences improvement of education quality in Q city. Additionally, the researcher is familiar with the context of Q city and has local contacts in this city to facilitate data collection. Therefore, it was appropriate to administer the quantitative survey in Q City.

Considering that there are 10 districts subordinated to Q city bureau (Q City, 2017), 10 junior high schools were selected with one school in each district chosen based on its school

performance rank in the district; this was to ensure a representative sample from the different geographical regions in Q city. These 10 junior high schools included both high-performing schools, ordinary schools, and low-performing schools in the urban and rural areas. Urban schools mainly recruit students from the city and county areas and rural schools mainly recruit students from the village and town areas. School performance is distinguished by student performance on the entrance exam for senior high school, which is not published for the public. However, given that permission had been received to conduct the research (see section 4.7), the researcher received an internal ranking list of each school performance in Q city from a gatekeeper at one of the schools, who also facilitated access the 10 selected schools via an available network. Finally, all professional education staff, including headteachers, teachers, and administrative staff in each school were invited to participate in the questionnaire survey in case of a low response rate (Teddlie & Tashakkori, 2009, p. 173). This research mainly explored participants' perspectives on inspection purpose, indicators, and procedure and their impact on schooling process and education quality. Thus, only internal school members mentioned above were invited to participate in this survey. The participants with diverse ages of teaching can provide a different understanding of education quality and school inspection based on their working experience in classroom teaching, school management and preparing for school inspection. Specifically, they are likely to have a professionally informed view in relation to identifying the importance of each indicator and procedures in demonstrating and improving education quality in the schooling practice. The participants are anticipated to give more practical and justifiable support to improve current schooling and school inspection practice. Finally, according to an estimate of the number of the eligible teaching staff in each school which ranged from 50 to 70, depending on school size, a total of 550 questionnaires equivalent to approximately 70-100 percent of staff were delivered to 10 schools. This was considered an adequate target sample because a minimum of 20-50 responses from each school across 10 schools is large enough to accommodate data analysis in this research (Sudman, 2013). The process of data collection will be stated in the following section.

The number of questionnaires delivered to each school was dependent on the number of staffs who were available before data collection, according to headteachers and managers in each school. A 66% response rate was eventually achieved with 364 out of 550 questionnaires returned. Participants who did not respond to the questionnaires were lecturing in the classroom or were engaged in the extracurricular activities with students outside the school during the period of data collection. There were 192 participants from schools in the urban

areas and 172 participants from schools in the rural areas (see Table 4.1 below). There were six headteachers, 337 teachers, and 21 administrative staff responding to the questionnaires, among whom 63% of participants had senior professional titles and 32% of participants had junior professional titles. In comparison, 60% of the total teachers were senior teachers and 40% were junior teachers in Shandong province (CNR., 2017). This sample with a slightly higher proportion of senior teacher and a lower proportion of junior teacher than that of Shandong province is roughly equivalent to the distribution of junior and senior teachers in Shandong province, thereby demonstrating a reasonably representative spread of senior/junior teachers.

Table 4.1 School-Area Cross Tabulation of Questionnaire Respondents

Count Missing= 136

Areas	Urban Areas					Rural Areas				
School	2	4	5	9	10	1	3	8	6	7
The Number of Valid Responses	36	40	36	39	41	42	38	33	30	29
Total	192					172				

4.4.1.3 Piloting

This survey was piloted in order to test every key aspect of the questionnaire, such as access to participants, construction of the survey instrument, and data collection (Aldridge & Levine, 2001). A trial of the survey allows the researcher to know how the instrument works and if the instrument performs as it has been designed for by collecting participants' feedback (Zoltan, 2002). In principle, participants who attend pilot studies should be as similar as possible to those in the main inquiry in order to examine the relevance and sensitivity of questions (Oppenheim, 1992). All the survey questions were piloted and amended by rewording some questions in the questionnaires based on six participants' effective and reasonable feedback so as to employ reliable scales, precise items, and neat forms (Oppenheim, 1992).

Aldridge and Levine (2001) stated that the quality of piloting was more important than that of quantity, which meant "small-scale but intensive piloting is far better than large-scale crude piloting"(p. 91). Therefore, a small group of eight participants was selected from the intended respondents to attend this piloting survey. As when the researcher piloted the survey, all primary schools and secondary schools in China were in the winter holiday; thus, the researcher could only deliver the questionnaires to the available intended participants by

email. Through piloting, the researcher received some very useful feedback from respondents, and this feedback was helpful to adjust some survey items to the local context prior to conducting the formal survey. It was unnecessary to change the questionnaire in structural and technical aspects. Some participants thought the general content was more reasonable than overemphasising the details, so the researcher revised some items. For example, the original version of the item "students' health examination is checked at least once per year" was changed into "students' health examination is checked annually"; "each student masters two kinds of physical sports techniques at least" was changed into "each student masters some kinds of physical sports techniques."

4.4.1.4 Survey Data Collection Procedure

Participants, including headteachers, teachers, and administrative staff who are responsible for teaching and school administrative affairs from ten schools across urban and rural areas, were invited to participate in this survey. Five schools are in the urban areas, and the other five are in the rural areas, which included both high-performing and low-performing schools to obtain a representative sample. To conduct the survey in 10 schools, the researcher initially contacted the headteacher or school manager of each school to obtain access to the participants. Next, a one-to-one administration was applied by handing questionnaires to the headteacher or school manager who agreed to take responsibility for delivering questionnaires and managing the collection of completed questionnaires later (Zoltan, 2002) which was considered preferable because the personal form of administration could increase the chance for the questionnaires to be returned (Zoltan, 2002). Before data collection, the designated person explained the purpose of the inquiry on behalf of the researcher (in line with information provided at the beginning of survey – see Appendix V) and encouraged participants to be cooperative to finish the questionnaires while also indicating participation was voluntary. The designated person collected and handed questionnaires to the researcher when participants completed them. The questionnaire delivery and collection were conducted and completed during the period from February to April 2017.

4.4.1.5 Statistical Analysis of Survey Data

In this research, both descriptive analysis and inferential statistics were employed to analyse quantitative data using the computer software SPSS (Field, 2013). The thematic analysis method was employed to analyse qualitative data obtained from participants' responses to the open-ended question. The procedure of analysing qualitative data obtained from responses to the open-ended questions in the questionnaires will be introduced in section 4.4.4.5.

A large amount of evidence has verified that the Likert scale can be investigated by either means of parametric or non-parametric procedures (de Winter & Dodou, 2010). Parametric tests are seen to be more powerful than nonparametric tests because parametric tests are liable to offer "the right answer" when analysing the Likert scale responses, even if statistic assumptions are violated, such as normal distribution (Sullivan & Anthony R, 2013). Therefore, a parametric test was applied in this study.

Descriptive analysis were conducted to show the mean and standard deviation of each survey item (Creswell, 2014) and to confirm the degree of stakeholder agreement on the validity and relevance of the evaluation/inspection purpose, indicators, and procedures, aiming to answer RQ1 to RQ3. To further test certain purposes/criteria/procedures/consequences that were rated significantly more/less important overall than others, a repeat-measures one-way ANOVA and a paired samples t-test were applied.

Given the diverse socio-economic circumstances across different regions in China, the discrepancy in education quality between the urban and rural areas is the most prominent (see section 3.3.2.4). Thus, it might be expected that participants from the urban and rural schools could provide different insights into inspection indicators, approaches and procedures, and consequences in school inspection practice to demonstrate and improve education quality. Therefore, the survey findings comparing participant responses from urban and rural schools are investigated.

Additionally, teachers who work in primary and secondary schools in China are awarded different professional titles based on their teaching performance and academic abilities (Jianmin, 2017). Considering that teachers with senior professional titles, in comparison with junior teachers, are required to be equipped with higher educational attainment and more educational research and are required to have more advanced academic degree, teaching ages, and teaching performance (Huibin, 2016), it was expected that the perspectives of teachers with senior professional titles might be different from teachers with junior professional titles in regards to inspection purpose, indicators, procedures, and consequence (see section 4.4.1.1). Therefore, because of little literature saying that teachers with different professional titles have different perceptions of the inspection system, the perceptions of teachers with senior and junior professional titles are investigated. Teachers' professional titles in junior high schools (JHS) are comprised of 'Zheng' senior JHS teachers, senior JHS teachers, first-Rank JHS teachers, second-rank JHS teachers, third-rank JHS teachers, and non-professional-title teachers. In order to group participants into two independent samples with a clear grade

division, participants who are titled as ‘Zheng’ senior JHS teachers, senior JHS teachers, and first-Rank JHS teachers were distributed to senior teacher group (S), and participants who were titled as second-rank JHS teachers, third-rank JHS teachers, and non-professional-title teachers were involved in the junior teacher group (J).

Considering that there were more senior teachers in the urban area (n=155) than that in the rural area (n=75) among the sampled participants, perceptions of participants from the urban and rural area might be affected by perceptions of participants with senior and junior professional titles. Thus, a two-way ANOVA which is aiming to compare the means of one dependent variable when there are two or more categories (factors) was conducted. Specifically, in this study, a two-way ANOVA can test whether participants’ professional titles as an independent variable affect the perceptions of participants from the schools in the rural/urban area as the second independent variable.

Due to sample selection, there was an apparent difference in education quality among the 10 schools investigated in this research according to students’ performance in the entrance examination for the senior high school (see section 4.4.1.2). Thus, participants from the 10 schools might have different perceptions of school inspection purpose, indicator, approach/procedure, and consequences. In view of school effectiveness theory, school differences in student outcomes are affected, to most extent, by different internal school factors and diverse school contexts (e.g. diverse school development levels and teacher quality). Thus, a one-way ANOVA was performed to compare the survey findings between schools. Next, a Bonferroni post hoc test was conducted to identify which school is different from the rest of schools through multiple comparisons. Although the Bonferroni post hoc test might lack statistical power to control the Type II error well, it is conservative in controlling the Type I error.

In addition to figuring out the differences in perceptions of participants from different groups including senior/junior, the rural/urban areas, and 10 schools, there might also exist differences in perceptions of participants in different school positions (e.g. teachers, headteacher, and administrative staff). However, after operating the one-way ANOVA test, the differences in the perspectives of participants in different positions were only reflected in a few items. Therefore, the differences in the perceptions of participants in different positions were not further measured in this research.

4.4.2 Qualitative Strand

In this research, a combination of different approaches can offer alternative data sources, which might finally enhance the overall findings (Darlington & Scott, 2002). A face-to-face interview was employed because more questions can be asked in an interview than a self-completion questionnaire, particularly to collect verbal responses (Aldridge & Levine, 2001). Another advantage of the interview is that the researcher can exert control over the context of response. Specifically, the researcher can explain complex questions to participants if needed. Thus, the researcher can ensure participants take each question seriously and adjust the sequence of questions based on participants' responses by maintaining a good relationship with the participants (Aldridge & Levine, 2001).

4.4.2.1 Semi-structured Interview Instrument Design

In this study, a semi-structured design was applied in the interview design (see Appendix III). The semi-structured interview tends to lead the conversation to flow more naturally when based on a certain ready-made interview instrument and allows the conversation to be developed in an unexpected direction. Interviewees might answer the questions by choosing from what they see as important (Arksey & Knight, 1999). In this case, interviewees are likely to provide some knowledge that the researcher has not considered in advance (Hesse-Biber & Leavy, 2006). Therefore, a semi-structured interview could offer more latitude to the researcher, who can probe through clarification and elaboration of the given responses in addition to addressing prior-presented research questions (May, 1997).

The main content that the interview schedule is supposed to cover is dependent on the research aims and questions, as well as the significant/nonsignificant results yielded from the formal quantitative data analysis. The interview schedule can be illustrated in two sections: school inspection indicators and school inspection implementation. In alignment with the research questions and aims, in section one, the interview questions sought to encompass aspects of the pros and cons of the current school inspection indicators in Shandong province in evaluating education quality and the most important components of education quality to inform school inspection indicators in Shandong province. Section two included interview inquiries regarding school inspection purpose, staff's preparatory work for school inspection, the strengths and weaknesses in the process of school inspection when implementing the inspection procedures, such as self-evaluation, feedback from inspectors, rewards/sanctions, and the frequency of school inspection, as well as improvement of the school inspection system. Although the interview questions did not address RQ2 and RQ3 directly, the interview inquiries regarding the strengths and weaknesses in the process of school inspection

and the policy context of education and the school inspection system will provide some clues to explain the surprising and significant statistical results in addressing RQ2 and RQ3.

4.4.2.2 Sample of Interview

In total, thirteen interviewees from three schools, including headteachers, teachers, city inspectors, and an education officer were purposefully selected and invited to attend the individual interview. The sample size of the interview is supposed to be much smaller than that of the questionnaire survey, which is helpful to acquire an in-depth elaboration of qualitative data, as well as a precise quantitative examination (Creswell & Clark, 2011). The participants were comprised of three headteachers/deputies who took a charge of the affairs related to school inspection, and six teachers (including three junior and three senior teachers) from three junior high schools, two city inspectors, one national inspector, and one national education officer. The selection of teachers was facilitated by the headteacher/school manager at each school and was in accordance with the teachers' availability. The gatekeeper who helped access the 10 selected schools for survey also facilitated access to two city inspectors via an available network, and the researcher accessed the national inspector and the national education officer via her personal network. Thus, they are expected to propose various points of view on education quality, inspection practice and the impact of school inspection on the schooling process, according to their different work experience in classroom teaching, school management, school inspection policy-making, and implementation. Interviews were conducted in one low-performing school and one high-performing school in the urban area and one ordinary school in the rural area, in order to obtain a complete, in-depth, and practical understanding of school inspection and education quality based on the different school contexts. In addition, two city inspectors with rich experience in implementing the school inspection policies of Shandong province and inspecting school quality were interviewed, and they were anticipated to provide more data regarding the existing issues of school inspection practice in Q city. Finally, a national school inspector and an education officer who have a better understanding of the strengths and weaknesses of school inspection system of China were interviewed to obtain the suggestions for the improvement of school inspection system and practice of Shandong province. The context of three schools is shown in table 4.2, and interviewees' background information can be found in table 4.3. The detailed information regarding school context will be presented in Chapter 6. Hence, a broad understanding of the research area can be constructed by a wide range of people who represent different views (Darlington & Scott, 2002) to strengthen the overall findings. However, due to the limits of the scope of Ph.D. research and the

employment of a survey in the first phase of mixed methods, the number of participants to attend individual interviews in the second phase were limited in this research (Darlington & Scott, 2002).

Table 4.2: Descriptive Information of Three School for Interviews

School Name / Information	School 1	School 2	School 9
Location	Rural area	Urban area	Urban area
School Type	Ordinary	High-performing	Low-performing
Size (Class)	20	19	24
The Number of Students	1100	900	1400
The Number of Staff	75	88	103
Teachers	50	55	65
Headteacher/Deputy	2	2	2
Students' residence in rural or urban areas	Mostly rural area	Mostly urban area	Mostly urban area

Note: Information provided by internal school documents

Table 4.3 Background Information of Thirteen Interviewees

Name	Position	Professional Title	School Location	School Status/Institution
M	Headteacher	Senior Teacher	The Rural Area	Average School
S	Headteacher	Senior Teacher	The Urban Area	Low-performing School
SH	Vice Headteacher	Senior Teacher	The Urban Area	High-performing School
H	Teacher	Junior Teacher	The Rural Area	Average School
W	Teacher	Senior Teacher	The Rural Area	Average School
Q	Teacher	Senior Teacher	The Urban Area	High-performing School
WO	Teacher	Junior Teacher	The Urban Area	High-performing School
B	Teacher	Senior Teacher	The Urban Area	Low-performing School
P	Teacher	Junior Teacher	The Urban Area	Low-performing School
Y	City Inspector	Senior	-	Q City Inspectorates
S	City Inspector	Senior	-	Q City Inspectorates
S	National School Inspector	Professor	-	S Normal University
W	National Education Officer	Researcher	-	Institute of Educational Research in B city

4.4.2.3 Piloting

According to Merriam (2009), the "best way to tell whether the order of your questions works or not is to try it out in a pilot interview" (p. 104). In the process of piloting, the researcher attempted to obtain a realistic sense of whether participants can answer questions by piloting the research instrument (Baker, 1994). In order to prepare for the formal interview, the interview instrument is revised and finalised according to the results of the piloting procedure (Maxwell, 2013). Before conducting the formal individual interviews, the researcher chose one urban school to pilot the interview instrument, in which one headteacher, one senior teacher, and one junior teacher were interviewed. Because piloting took place during the compulsory education schools' winter holiday, participants' availability in this school was considered. The interview instrument that was piloted with the headteachers and teachers lasted for one and a half hours. After piloting all the interview questions, the researcher found that the teachers were more familiar with schooling processes in relation to education quality than the process of school inspection, even though all of them had previously participated in school inspection. However, the headteacher was much more familiar with the school inspection process than the teachers. Hence, the researcher adjusted the order of interview questions by moving questions regarding the practice of school inspection before the questions concerning education quality when interviewing headteachers. Thus, the headteachers may provide more and better detailed information regarding school inspection to complement the information provided by teachers due to the time limit.

4.4.2.4 Interview Data Collection Procedure

The individual interviews with school headteachers and teachers were conducted once with each interviewee within the school settings. Firstly, the researcher got permission to access the selected participants from the headteacher/deputy of each school, and the interviews began with the headteacher. Next, one city inspector was interviewed in the city library, and the other inspector was interviewed in a separate office. Finally, the national school inspector and the national education officer were interviewed via telephone since they were in different provinces from the researcher. All the interviews were conducted using the official language: Mandarin Chinese. The content of interviews was recorded by using a voice recorder and transcribed afterward, which were approved by the interviewees. Prior to the interviews, an interview guideline along with a consent form (see Appendix V) was provided to each participant, in order to ensure that they all gave consent for participation in the individual interviews. Also, the interviewees were given enough time to prepare for the interview

questions carefully so that they could present their perspectives more coherently and comprehensively without missing any important points.

4.4.2.5 Thematic Analysis of the Qualitative Data

Thematic analysis aims to measure the adequacy, relevance, and meaningfulness of emerging themes to polish up ideas and to ascertain conceptual boundaries (Charmaz, 2000). The key points embedded in a theme capture something important in respect to the research questions (Braun & Clarke, 2006). The process of carrying on thematic analysis comprises six steps. First, it is critical to "immerse yourself in the data to the extent that you are familiar with the depth and breadth of the content" (p. 87) by actively reading data to searching for the meanings and patterns. Second, a series of initial codes are generated. Codes refer to "the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (Boyatzis, 1998, p. 63). Third, the initial codes are read again to identify the key categories emerging from data and generate an index of names that could help with interpreting and theorising the data (Liamputtong, 2009). Fourth, candidate themes are combined, separated, deleted to ensure themes to be distinctive and meaningfully coherent with each other (Braun & Clarke, 2006). Fifth, the names of the themes are revised by a process to "define and refine" the themes. Lastly, the final, confirmed categories and themes are used for presenting findings of Chapter 6.

In this research, the qualitative data emerging from interviews with related participants and participants' responses to the open-ended questions in the questionnaires were analysed using thematic analysis to address RQ1, RQ4, RQ5, and RQ6 and provide supportive evidence to further explain responses to RQ1, RQ2 and RQ3. The data obtained from fieldwork contained interview transcripts from audio recordings and transcripts of participants' responses to open-ended questions in the questionnaires. The data from the first three datasets (including the definition of education quality, the purpose for school inspection, and contextual issues influencing school inspection and education quality) was derived from the transcript of the interview. The data emerging from the rest of the two datasets (including strengths and weaknesses in the process of school inspection and improvement of school inspection practice) originated from transcripts of both interviews and responses to open-ended questions in the survey. Both deductive coding techniques and inductive coding were used. Deductive coding was first conducted based on the conceptual framework integrating international theories and school inspection documents and national and provincial school inspection frameworks from the Chinese context (see section 3.4.5.2). The codes were selected and compared against the conceptual framework, with the researcher considering if

they are relevant in addressing RQ1, RQ4, RQ5, and RQ6. Next, inductive coding was utilised when the existing theories were too limited to identify new codes from the transcripts (Drisko & Maschi, 2015). All the datasets were coded manually. After revising and refining, more sub-themes were generated from both data and literature (see the coding framework in Appendix VIII).

Out of 364 participants, 213 responded to the open-ended and short-answer questions in the section of the questionnaire that addressed RQ4 and RQ5, generating a larger amount of qualitative data than interview qualitative data. In this case, a descriptive summary of the manifest frequencies of the themes emerging from the data was provided by counting the number of participants out of total participants who mentioned a key theme (Drisko & Maschi, 2015). Although this type of descriptive analysis is not subject to interpretation that varies with context (Drisko, 2013), the larger sample size is representative to demonstrate the spread of social characteristics in relation to the research inquiries (Drisko & Maschi, 2015). Thus, the counts of the frequency that the key themes are mentioned by the participants were used to complement the findings obtained from qualitative thematic analysis based on the interview data to address RQ4 and RQ5.

4.5 Trustworthiness, Reliability, Validity in Mixed Methods

Lincoln and Guba (1985) asserted that the trustworthiness of research could not only be constructed based on validity and reliability. With regards to qualitative evidence of this study, four new terms of criteria concerning naturalist inquiry, including credibility, transferability, dependability, and conformability, were considered, while for quantitative evidence, four conventional criteria including internal validity, external validity, reliability, and objectivity, were considered.

4.5.1 Trustworthiness in Qualitative Research

Credibility and transferability are mainly related to qualitative research since qualitative research pays more attention to validity than reliability to demonstrate that the account offered by researchers and the participants is accurate, trusted and credible (Lincoln & Guba, 1985). With regards to confirmability, the real objectivity of the research is difficult to achieve in that all tests and questionnaires are designed by humans so that it is inevitable that researcher's biases are brought into the study (Patton, 1990). Credibility is the most crucial element for establishing the trustworthiness of findings and implications drawn from the qualitative research (Tashakkori & Teddlie, 1998). According to Eisner (1991), credibility

refers to a proper combination of the description, interpretation, and evaluation which make people feel the research is persuasive and confident. In order to achieve the credibility of qualitative research, it is operational to apply techniques of thick description and triangulation of data.

Triangulation of the research evidence means it will be more credible in that two or more sources of data, theoretical frameworks, and research approaches contribute to the final findings (Denzin, 1978). Tracy (2010) also supported this claim by arguing that multiple sorts of data, researcher views, theoretical frames, and methods of analysis could explore different aspects of problems, increase the scope, deepen understanding, and promote consistent interpretation. Considering the data sources, the qualitative data obtained from both the survey and the individual interviews would inform this research. Brewer and Hunter (1989) claimed that the focuses of different methods could compensate for their individual shortcomings and exploit their distinct advantages. In this research, participants expressed their perceptions and attitudes by responding precisely to the open-ended questions in questionnaires, while participants who attended individual interviews could provide more details of the background to explain their attitudes. Furthermore, site triangulation could also be achieved by triangulating the information provided by participants from different organisations in order to reduce the effect of a particular context or one peculiar organisation on the research (Shenton, 2004). Specifically, participants who participated in the individual interviews came from different junior high schools across the urban and rural areas, as well as diverse institutes, such as city inspectorates, universities, and educational research institutes. Therefore, "a variety of perspectives in order to get a better, more stable view of 'reality' based on a wide spectrum of observations from a wide base of points in time-space" (Shenton A, 2004, p. 68) can be obtained.

In addition, an in-depth description is vital to ensure the transferability between researchers and research goals (Cresswell, 2013). Thick description indicates that researchers need to reflect on the complicated data circumstances (Greetz, 1973). In other words, readers should be informed with enough details so that they can draw conclusions on their own. The understanding of the context could be achieved not only through long-term and close observation and investigations with stakeholders but also from the latent meaning and assumptions of superficial description (Tracy, 2010). As Merriam (1988) claimed, thick description provides readers with the main way to access transferability. Specifically, thick description offers sufficient and detailed information related to the participants or the background of the study, so as to decide on whether the findings can be transferred in light of

the “shared natures” (Erlandson, 1993). Qualitative research mainly creates knowledge in the context of history and culture by carrying out an in-depth and comprehensive study, which is entirely different from the quantitative study employing generalization. Thus, it is unlikely for such generalized knowledge to foresee future trends with the limited contextual diversities (Tracy, 2010).

In this research, the school inspection policy of Shandong province was reviewed by comparing it with other local and international literature to reflect issues and challenges found within the school inspection system in Shandong province. Underpinned by the provincial and the national context of China, the provincial inspection system was constructed based on the national inspection framework in China. This study intends to offer the contextual setting at an external level and internal level. At the external level, the whole picture of inspection system development in China was depicted where the educational innovation, reconstruction of inspectorates’ organization, and updates of inspection policy were illustrated. At the internal level, the natures of provincial inspection indicators, the process of school inspection, and the background of educational development in Shandong province were presented. Moreover, the significant details of interviewees’ background information and their schools’ contexts were provided (see table 4.2 and 4.3). All the detailed information in line with the requirements of a thick description contributes to transferability of conclusions which are applicable to similar research in other areas of China.

4.5.2 Validity of Quantitative Research

In perspective of quantitative research, potential threats to external validity will arise when incorrect inferences are drawn from data to make it generalizable to either the population or to the situations other than the one in the study (Creswell, 2014). External validity would usually be strengthened by a greater number of representative cases. The effects of interviewers’ bias on reliability and consistency of results can be reduced by a well-constructed questionnaire (Bryman, 2012).

In this study, in order to explore participants’ representative, as far as possible, perceptions and understanding about the current school inspection system of Shandong province in comparison with other school inspection systems in other provincial and international contexts, a questionnaire survey is an appropriate way in data collection. Apart from generalizability, sample size also influences "statistical validity of the findings" through affecting the margin of error and the power of statistical tests to examine effects (Tashakkori & Teddlie, 1998, p. 72). With regards to this research, the obtained sample size is relatively

large (n=364), which enhances the external validity of research to some extent. However, the lack of an available, ready-set sampling frame because of the unknown sampling size of participants, as well as the limited scope of the Ph.D. project make it appropriate to employ a non-probability purposive sampling in this research. This determines that the findings of this research are tentative and not generalisable to other contexts beyond the context of Q city to other cities in Shandong province and other provinces in China, though the selected ten schools can represent the diversity across ten districts of Q city.

The internal validity of quantitative research has been defined as the degree to which we could credit the findings of the study, for example, by indicating a "causal" relationship between variables (Tashakkori & Teddlie, 1998). As this research is a nonexperimental study, consciously examining probable explanations about the conclusions of a study or other relationship between variables, and making the evaluation of the feasibility of the explanations might improve the internal validity of research findings (Tashakkori & Teddlie, 1998). In this research, a descriptive statistical analysis, a repeat-measures one-way ANOVA, a two-way ANOVA, and a one-way independent ANOVA were conducted to analyse the quantitative data. The outcomes yielded from both the descriptive analysis and repeat-measures one-way ANOVA were contrasted to figure out participants' positive/negative perceptions on the school inspection practice, such as purpose, indicators, procedures, and impact. Considering that the school differences in education quality might exist due to different factors underlying schooling process and the local context, a one-way ANOVA was performed to see if there is any difference in perceptions of participants from 10 schools. A post hoc test was conducted through multiple comparisons to further make sure in which school participants might have significantly different perspectives from the other nine schools, and so the reasons embedded in the school's context might be further exploited. Then, a two-way ANOVA was performed to see if the perceptions of participants with junior/senior professional titles are affected by the urban/rural area where participants' schools are located. However, it is important to emphasise that all the tests above are essentially seen as exploratory and do not intend to draw any conclusions or explanations regarding a causal relationship between the variables.

4.6 Potential Methodological Limitations

One of the main purposes of applying mixed-methods is to provide a way to harness strengths and offset weaknesses in both quantitative and qualitative methods (Creswell & Clark, 2017). Quantitative methods are weak in obtaining an in-depth understanding of the research context

since surveys involve researchers' personal biases and interpretations and do not allow participants' direct expression. In this research, 13 individual interviews were conducted in order to generate more context-based details of school inspection practices and schooling processes and their perceived impact on the quality of education and school inspection. The information emerging from the research context provided by the interviewees is expected to exceed the scope of survey items which were identified in the previous research and to explain significant (or non-significant) or surprising quantitative results (Bradley et al., 2009; Morse, 1991).

Despite the interview's methodological strengths in collecting richer information based on people's personal experiences and stories (Hennink et al., 2011), the information only represents the opinions of a limited number of participants and cannot achieve representativeness. In this case, the survey's external validity which can be further strengthened, which can be strengthened by a great number of representative cases can compensate for the interview's weaknesses. However, in this research, because of no ready-set sampling frame available and the limited scope of Ph.D. research, a non-probability sampling strategy was employed in this survey. This means that the results of the study cannot be generalised beyond the sampled ten junior high schools of Q city in Shandong province within this study; otherwise, potential threats to external validity will arise when generalising incorrect inferences to either the population or to the situations other than the one in the study (Creswell, 2014).

In this research, the gatekeeper at each school facilitated the researcher's ability to deliver and collect questionnaires and to contact the interviewees. Although this to some extent increased the response rate of the survey, it could also exert external pressure on participants who are working in a centralised educational system. Teachers' volunteerism might be undermined by school leaders' administrative power which might also prohibit participants from articulating passive perspectives on schooling processes.

As this research is a nonexperimental study, neither its qualitative nor quantitative research strand demonstrate a "causal" relationship between variables, which to some extent might reduce the internal validity of this research. According to the research questions, both the urban/rural area where the schools are located, and participants' senior/junior professional titles are seen as important contributors which might affect participants' perspectives on education quality and school inspection practice. However, they cannot provide any causal explanation for participants' different perceptions.

The measurement validity is concerning whether the survey question which is devised according to a concept actually reflects the concept that is supposed to be measuring (Bryman, 2012). This requires the researcher to carefully and comprehensively review the previous literature to inform the measure of the survey instrument. Although the researcher has reviewed the literature related to this study as far as possible, only four provinces' school inspection frameworks in China were reviewed in addition to Shandong province framework, due to the limited scope of a doctoral thesis and time available. The research scope is still too limited to comprehensively reflect the overall circumstances of the 31 provincial inspectorate frameworks in mainland China, despite the selected four inspectorates' representativeness of geographical and socioeconomic diversity in China.

4.7 Ethics Issues

In the process of research, when the researcher intends to reach the research goals, potential ethical issues which could violate participants' welfare might arise. Thus, the UOB (2015) required research ethics procedures and guidelines have been rigorously followed. Ethics issues would be more evident in terms of qualitative research because of its characteristics. Therefore, before collecting research data in China, the researcher drafted and discussed all the research procedures related to ethical concerns with a colleague from the School of Education in UOB. The ethics form (see Appendix VI) presents all the ethical issues considered in this research. In order to achieve the research goals, participants' voices should be heard, which demands that the researcher secure participants' personal information and make the data anonymous (Hennink et al., 2011).

4.7.1 Anonymity & Confidentiality

In data collection, anonymity and confidentiality are supposed to be maintained. Confidentiality means that the content of discussion between researcher and participants cannot be uncovered because, in social science, the participants might be reluctant to tell many details about themselves. If their information is freely revealed to the third-party, adverse consequences might be brought about to the participants (O' Neil, 1996). In order to ensure confidentiality of the research, participants' names and any details from confidential data should be protected from being identified at an earlier stage (Israel & Hay, 2006). Even in some disciplines, the name of the community where the research is conducted should also be disguised (Hancock, 2001). For this research, the information provided by participants in responses to the interview questions was reported in the thesis. Thus, confidentiality of the

data to some extent was threatened. Nonetheless, anonymity can be ensured as far as possible by removing all the information relevant to identities of participants in the research from quotations used from them (Hennink et al., 2011, p. 71). In this research, participants' real identities will only be acquired when it is necessary to contact participants to double check if their responses are consistent with what has been transcribed by the researcher. Otherwise, their personal information will not be recorded. When the researcher needed to quote the participants' perspectives in this thesis, some capital letters were employed to distinguish different participants. Similarly, the names of the city where conducted the fieldwork were not revealed, but are replaced by Q. Some description of the contextual natures of the city were also provided when they were necessary to understand information presented in the thesis (Hennink et al., 2011, p. 72).

4.7.2 Informed Consent

During the interview, researchers should firstly consider informed consent to secure participants' trust. Informed consent requires the researcher to inform participants about the facts of the research before participants make decisions regarding attending or participating in the investigation (Frankfort-Nachmias & Nachmias, 1996, p. 83). When the participants were fully informed about the research process via the information sheet, a consent form was sent to participants, requesting that they sign it. This indicated that participants freely consented to attend the survey and interview and they gave consent for the data to be used in this study since they understood all the information related to the research. The concept of informed consent is comprised of four elements, including competence, voluntarism, full information, and comprehension.

4.7.2.1 Competence

Competence refers to participants' ability to be responsible for their decisions. Miller and Willner (1974) employed the consent form to certify if the comprehension of the recruited participants was enough for them to be capable of giving informed consent. In this research, participants' competence to understand what the research might be is required. Thus, the participants who were invited to attend the interviews included teachers, headteachers from junior high schools, and external city inspectors. All of them shared the similar cultural and research background with the researcher and were familiar with the formal terms drawn from the school inspection policy documents and related literature that were likely to emerge from the interview questions. The interview questions in alignment with the participants' professional background could also leave participants a reliable impression of the interview.

Right from the beginning, the researcher notified the participants that data collected through interview was to address the objective of the academic research, but not for other purposes. It was also stated in the consent form that participants could attend and withdraw from the interview if they requested.

4.7.2.2 Voluntarism

Voluntarism requires researchers to give sufficient freedom to participants to make decisions about whether to attend the survey and interview, on the condition that participants know all the risks they are to undertake (Frankfort-Nachmias & Nachmias, 1996).

4.7.3 Researcher Bias

Another ethics issue with potential threats to research validity is researcher bias, which is caused by exploratory qualitative research with open-ended and less structured natures (R. Burke, 1997). Many factors can contribute to unfair data collection and data interpretation, for example, the personal mood of researcher devoted to a certain topic, previous practical experience, and researcher's presuppositions formed in reading literature (Morrow, 2005). In order to avoid research bias indicated by these possible factors, the researcher attempts to employ the strategy called reflexivity which was defined by Rennie (2004, p. 183) as "self-awareness and agency within that self-awareness". In other words, reflexivity is viewed as a process where researcher's positionality is involved in a continual internal conversation and self-evaluation, and dynamic acknowledgment and explicit recognition that the research process and results might be influenced by this position (Bradbury-Jones, 2007; Guillemin & Gillam, 2004).

The researcher used to study in the compulsory education system in China, which has experienced a series of educational innovations, including the most influential curriculum reform. As was mentioned in Chapter 1, the researcher witnessed the process as schools took countermeasures to carry out school reforms in curriculum content, teaching practice, students' learning methods, and evaluation approach of education quality, and the researcher was aware of how schools prepared for school inspections. Additionally, after finishing the master's degree, the researcher assumed that the factors underlying the schooling process played more important roles than school inputs in improving education quality. Therefore, the researcher unavoidably kept some pre-existing perspectives in mind about the definition of education quality and the practice of school inspection in China, which to some extent could potentially influence the construction of the interview instrument and interview process. The researcher was keen on reducing the effects of researcher bias, so before developing the

instrument for the interview, the researcher comprehensively reviewed the relevant literature and latest school inspection and education reform policies in the context of China.

Given that the city and schools where the fieldwork was conducted are the places that the researcher used to live and study, the researcher felt at ease when interviewing the participants in such a familiar environment. Also, the participants were interviewed in Mandarin, which enabled the participants to express their perspectives accurately and smoothly. In this case, the researcher assumed that participants who had been working in schools for a long time should easily understand the main focuses of the interview questions. This might lead the researcher to take some features of research context for granted unconsciously but ignore if participants could understand the focus of the interview questions completely and in the right way. When the researcher asked for participants' perspectives on the importance of the inspection indicators to demonstrate educational quality, the participants unexpectedly responded to the interview questions by adding many details about how each indicator was implemented and introducing additional contextual issues in the schooling practice in relation to the inspection indicator (classroom teaching reform, school-family cooperation, etc.). One possible reason might be that participants, especially teachers, were more familiar with the schooling practice than the inspection indicators, which drove them to depart from the focus of the interview questions on school inspection indicators to the policy context where school inspection is conducted, and school quality is evaluated in the schooling process. Therefore, the evidence provided by the participants cannot be used to address the original research question directly, but to bring out a new research question RQ6 regarding stakeholder perceptions on the policy context of school inspection and education that influences education quality. Nonetheless, the findings in response to the new research question can still be used to explain the surprising and significant statistical results in the first phase of quantitative research by providing rich context-based information. This experience prompted the researcher to pay attention to clarifying the focuses of the interview questions and double checking if the participants thoroughly understood the interview question in the process of the interview.

4.8 Chapter Conclusion

This chapter outlines the overall design of the research with detailed procedures regarding how this research was carried out. This research is supported by pragmatism which insists on making use of the strengths of quantitative and qualitative research methods to compensate for their weaknesses. The qualitative research strand was conducted to address RQ1, RQ4,

RQ5, and RQ6 following the quantitative research strand which aimed to address RQ1-RQ3. The results yielded from each strand would be compared and triangulated into an overall interpretation. In the quantitative research strand, 364 participants from ten junior high schools across the urban and rural areas accounted for a response rate of 66.18%. In the qualitative research strand, 13 participants including teachers, headteachers, city/national inspectors, and an education officer contributed to diverse perspectives which were underpinned by the distinct and diverse contextual characteristics. Then, this chapter introduced the process for developing the survey instrument according to the previous literature, the layout of the questionnaires, and the main questions of the interview schedule. This chapter also justifies the procedures used in carrying out the survey and individual interviews, such as accessing the gatekeeper and piloting the survey instrument, and data analysis, such as statistical analysis and thematic analysis. Next, trustworthiness issues for qualitative research, validity issues for quantitative research, and potential methodological limitations were discussed. Lastly, this chapter was finalised by discussing ethical concerns about anonymity, informed consent, and confidentiality to accommodate the guidelines for conducting research in and outside of the UK. The researcher provided critical thinking around the researcher's biases in each step of the research process. This chapter provides a reflexive account of the overall study process. The findings obtained from quantitative data analysis and qualitative data analysis and how they are integrated are provided in the following two chapters.

Chapter 5 School Stakeholders' views about School Inspection: Findings from the Survey

5.1 Introduction

This chapter introduces the findings obtained from analysis of the quantitative questionnaire data. Participants' perceptions of the importance of school inspection purposes, indicators and procedures/approaches, which potentially affect school inspection quality and education quality will be presented, along with perceptions of the positive or negative consequences brought by school inspection in Shandong province. To address RQ1-RQ3, a descriptive analysis was conducted to identify which items were higher/lower rated by participants, and the differences were further quantified through a repeat-measures one-way ANOVA. Then, a two-way ANOVA was performed with the independent factors of professional title (J/S) and school location in the urban/rural area (U/R) which might have significant main effects on perceptions of participants. Since there are many nonsignificant results emerging, only significant results are emphasized (non-significant results are reported in Appendix VII). In addition, an independent one-way ANOVA was performed to provide more evidence about whether participants in certain schools have very different views about the elements of school inspection. The main findings of the quantitative research are summarized and discussed after addressing the following research questions:

Research Question 1: What are stakeholder perceptions on the concept of education quality and the purpose of school inspection? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

Research Question 2: What are stakeholder perceptions on *the importance of different school inspection indicators* in order to demonstrate education quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

Research Question 3: What are stakeholder perceptions on *the importance of different approaches and procedures used in school inspection* in order to demonstrate and improve education quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

5.2 RQ 1: What are stakeholder perceptions on the purpose of school inspection? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

5.2.1 What are stakeholder perceptions on the purpose of school inspection?

Participants' different views of the purpose of school inspection in Shandong province were demonstrated by ticking the degree of different attitudes (from strongly disagree to strongly agree) towards nine statements regarding the school inspection purposes. The mean value of each response is compared in table 5.1 below to show which statement is the most/least relevant purpose to external school inspection. In order to certify whether these observed differences are statistically significant, a repeat-measures one-way ANOVA was performed. The percentage of respondents choosing strongly agree/agree is also presented as an alternative way to understand the patterns in the data, but note that the ANOVA was conducted using the full five-point scales.

Table 5.1: Participants' Views on the Purposes of School Inspection

Purposes of School Inspection	Percentage of Strongly Agree/Agree	M	SD
*+15.5 To promote schools to comply with legal regulations	83.24%	4.12	.832
*+15.2 To promote school development	82.4%	4.11	.807
15.4 to promote teachers' professional development	80.5%	4.07	.836
15.3 to promote students' overall development	80.2%	4.07	.856
15.6 To promote educational equity	77.93%	4.05	.858
15.1 To improve education quality	80.72%	4.03	.842
15.9 to improve parental satisfaction	75.31%	4.00	.836
15.8 To improve students' academic outcomes	75.98%	3.99	.886
*-15.7 To promote teacher/school accountability	74.03%	3.92	.876
Main Effect	F	P	
	9.199	.003	

Note: n=363; *+: significantly higher rated than item 15.1, 15.7, 15.8, and 15.9; *-: significantly lower rated than item 15.2, 15.3, 15.4, 15.5, and 15.6.

The survey items (15.1-15.9) asked Chinese teachers/stakeholders' opinions about the purposes of school inspection that have commonly been identified in previous international literature (see Chapter 2) and typically all purposes listed were relevant to some extent, but some were rated more highly than others. According to participants' perceptions, the three most recognised purposes of school inspection were to promote schools' compliance with legal regulation (15.5), school development (15.2), and education quality (15.1), and a relatively smaller variation of participants' responses was demonstrated. The three lowest rated purposes of school inspection were to improve parental satisfaction (15.6), students' academic outcomes (15.7), and teacher/school accountability (15.8) (see Table 5.1). The result of the one-way repeat-measures ANOVA showed that there were significant differences in perceptions of participants regarding school inspection purpose ($p<0.05$). The

results of Bonferroni post hoc tests show that item 15.5 and 15.2 were significantly higher rated, and item 15.7 was significantly lower rated than most of the items.

The results above indicate that promoting the school to develop and to comply with legal regulations are the highest rated purposes by participants. Highly approved purposes, such as to promote "education quality" and "students' overall development" stress the improvement function of school inspection. In addition to demanding that schools achieve the minimum level of education quality, the school inspection system is responsible for encouraging schools to comply with the legal requirements. (De Wolf & Janssens, 2007). This is in line with the interviewees' perspectives (see section 6.2.2.1 in Chapter 6).

Conversely, "to promote teacher/school accountability" was the lowest rated purpose with relatively larger variation among participants' responses, despite this purpose being one of the two basic functions of school inspection (Slater, 2013). The strength of agreement with the school improvement item was higher than with the accountability item. This may be because the educational inspectorates do not publish school performance data or give any sanction to schools. Hence, as discussed in Chapter 6, accountability was deemed to be less prominent than improvement by participants who thought that school inspection mainly plays a role in improving education quality through providing advice for improving schooling processes (e.g. classroom teaching, school organisation and leadership, etc.).

It is noteworthy that item 15.8 "to improve students' academic outcomes" was rated lower than item 15.3 "to promote students' overall development". This suggests that participants tended to agree on a broader concept of education quality where students' overall outcomes were given more attention than academic achievement alone. As a particular focus of education quality in this study, education equity seems to be attached less importance than as expected in that item 15.6 "to promote education equity" only ranks 5th among 9 items. It will be argued later that education equity at present is mainly reflected in the allocation of educational resources via the government's budget grant, while the school inspectorates may have not placed enough emphasis on school internal education equity yet, such as equity in classroom teaching and students' outcomes (see section 6.5.4).

5.2.2 Are there any differences in the views of participants with Junior/Senior professional titles from the urban area and rural area?

Next, a two-way ANOVA test was performed on each item regarding school inspection purpose to test if participants from the urban area (U) and rural area (R) have different perceptions, and if J/S professional titles affect perceptions of participants from the urban and rural area.

Table 5.2: Significant Results of Two-way ANOVA in R/U and J/S on the Purposes of School Inspection

Purpose	Mean				F (p)		
	R	U	J	S	R/U	J/S	IE
15.5 to promote schools to comply with legal regulations	4.28	4.05	4.20	4.08	**4.364 (.037)**	.777 (.379)	1.004 (.317)
15.6 to promote educational equity	4.23	3.96	4.14	4.00	**6.704 (.010)**	1.464 (.227)	.432 (.511)
15.8 to improve student academic outcomes	4.11	3.94	4.11	3.93	1.143 (.286)	.985 (.322)	**5.358 (.021)**

Note: R=Rural, U=Urban, J=Junior, S=Senior, IE=Interaction Effect. p-values in parentheses. Differences with $p<.05$ highlighted in bold.

The result of the two-way ANOVA shows that there was a significant main effect of the urban/rural area on the difference in perceptions of participants in terms of item 15.5 and 15.6 regarding school inspection purpose, but the results do not show a main effect from a junior/senior professional title or significant interaction between the effects of junior/senior professional titles and urban/rural area. Thus, it can be implied that item 15.5 "to promote schools to comply with legal regulations" and 15.6 "to promote educational equity" were rated significantly higher by participants from the rural area than participants from the urban area.

This may reflect a more old-fashioned school inspection practice in the rural schools than in the urban schools in terms of being more focused on legal requirements and also focused on local economic conditions regarding equity. According to an interviewee, this may be because rural schools were visited less frequently by inspectors than the urban schools, so the limited time for visiting a rural school might mean that inspectors are unable to spend extra time in examining school management and classroom instruction, and instead focus on a simple check of compliance with legal regulations and control of administrative issues (Churches & McBride., 2013; Darvas & Balwanz., 2014). According to the statistical results, participants from the rural area have more willingness to promote educational equity and to realise it through school inspection than those in the urban area, because of the widening gaps in school quality between the rural and urban areas caused by imbalanced allocation of educational resources, particularly in compulsory education school equipment, teaching facilities, and teachers' quality (Bao, 2006; Sun & Xu, 2015; Zhu et al., 2017). Accordingly, the interviewees also reported this argument (see section 6.5.4 in chapter 6). These findings will be discussed further in Chapter 7.

There were no significant main effects of junior or senior professional title on agreement with any of the items on the purposes of school inspection. However, there was a significant interaction between participants from U/R and participants with S/J on the participants' perceptions of item "to improve student academic outcomes" (15.8). This evidence suggests

that differences between participants with the S/J professional title varied between the U/R areas. Specifically, in urban areas improvement of academic outcomes was more highly rated by junior teachers (M=4.15, SD=.986) than senior teachers (M=3.81, SD=.851); while in rural areas it was more highly rated by senior teachers (M=4.16, SD=.839) than junior teachers (M=4.02, SD=.851).

Importantly, teachers with teaching experience of 10 years and more and a bachelor's degree in the urban areas are more than teachers with similar background in the rural area (Li, 2016). Moreover, fewer teachers in the rural schools were able to receive high-quality training for professional development in comparison to what was available for urban teachers (Wu & Yand, 2005). Consequently, teacher effectiveness among rural area teachers may be further weakened, resulting in a large gap in student outcomes between urban and rural areas. Additionally, teachers' effectiveness is seen as an important contributor to teachers' expectation for students, which seriously influences students' academic achievements in rural areas (Yiu & Adams, 2013). This might explain why students' academic outcome was rated more highly by senior teachers than junior teachers in rural areas to demonstrate inspection purpose.

Since in this research, the sampled senior teachers are a majority in the urban schools (n=155) in comparison to rural schools (n=75), the atmosphere of competitiveness and utilitarianism is stronger than rural schools, and such an atmosphere is even enhanced by an increased number of migrant workers' children (Sun & Xu, 2015). It has been noted that junior teachers are more motivated than senior teachers to seek promotions by improving student academic outcomes, which could bring about increased salary and reputation (Karachiwalla & Park, 2017). Therefore, "students' academic outcome" was higher rated by junior teachers than senior teachers in the urban area to demonstrate school inspection purpose.

To identify if participants from 10 schools had different perceptions of school inspection purposes, a one-way ANOVA test was performed. However, there was no significant effect from the schools on participants' perceptions of items regarding school inspection purposes.

5.3 RQ 2: What are stakeholder perceptions on the importance of different school inspection indicators in order to demonstrate education quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

5.3.1 What are stakeholder perceptions on the importance of different school inspection indicators of school inspection in order to demonstrate education quality?

In order to examine participants' attitudes and perspectives on the importance of the indicators used in school inspection to demonstrate education quality, participants are required to give each indicator a value (from one to five) to show the degree of importance (from "not important at all" to "the most important"). The indicators to be measured are drawn from school inspection framework of Shandong province, four provincial inspection frameworks in China, China national inspection framework, as well as related international theories and literature in European and OECD countries (see section 3.4.5 and 3.4.6). These indicators are categorised into four parts including compliance with legal regulations, organization and management, teaching and learning, and outcome (see Appendix I). Considering that participants' views on most of the indicators are positive overall, further quantification of the significance of these observed differences was required, so a repeat-measures one-way ANOVA was performed to show which items of school inspection indicators are the most/least important for participants to demonstrate education quality on average. As an alternative way to understand the patterns in the data, the percentage of respondents choosing the most important/important is also presented but note that the ANOVA was conducted using the full five-point scales.

5.3.1.1 Compliance with Legal Regulations

Table 5.3: Participants' Views on the Importance of Indicators Related to Compliance with Legal Regulations

Compliance with Legal Regulations	Percentage of the Most Important/Important	M	SD
*+17.8 Students' places for food and drinking, living and learning where conditions of air, sunshine reach the requirements, to keep infectious and common diseases and food poisoning from students	92.31%	4.63	.670
*+17.7 School teachers and students regularly attend emergency evacuation exercises for safety	92.58%	4.61	.683
*+17.10 Students' health examination is checked annually and saved in students' health files.	92.05%	4.6	.723
17.4 Academic examinations for students in secondary schools are strictly arranged to avoid cheating in exams.	91.76%	4.59	.725
17.9 Students' eyesight is regularly checked in expectation of meeting the standards of students' health.	92.3%	4.58	.719
17.6 Financial management of the school strictly complies with national regulations.	90.93%	4.56	.732
17.5 The school does not run any paid tutoring centre	88.19%	4.49	.786
*-17.2 School annually holds sports games.	88.46%	4.45	.759
*-17.3 The times of running academic exams should comply with relevant laws and regulations	87.63%	4.42	.785
*-17.1 Children of rural migrant workers in cities are normally accepted in compulsory education equally to urban children	88.46%	4.39	.781
Main Effect	F	P	
	21.319	.000	

Note: 17.1, n=363; 17.3, 17.7-17.9, n=361. *+: significantly higher rated than item 17.1, 17.2, 17.3, and 17.5; *-: significantly lower rated than item 17.4, 17.6-17.10

"Compliance with legal regulations" covering the survey items (17.1-17.10) normalise school and teachers' behaviours while running the school. Participants expressed their various attitudes towards the importance of each indicator to demonstrate education quality. According to participant response, the most important indicators are: places for student' living and learning (17.7), attendance of emergency evacuation exercises for safety (17.8), and regular examination of students' health (17.10), and the lowest rated indicators are holding sports games (17.1), the times of running academic exams (17.3), and insurance of rural migrant children's access to compulsory education in the urban schools (17.2) (see Table 5.3), with the significance of these differences confirmed by Bonferroni post hoc tests.

The highest rated indicators derived from respondents in Shandong province are all related to students' physical well-being encompassing health and safety. In alignment with the perspectives of OECD (2011), safety issues were regarded as the key factor that might influence educational effectiveness. Similarly, Ofsted (2016) described overall effectiveness of schools with an emphasis on welfare that could be achieved through effective safeguarding, and social, emotional and physical well-being. Conversely, participants' perceptions indicate that indicator 17.3 and 17.2 were significantly less important than the indicators regarding students' well-being in demonstrating education quality. The reason might be that following government's requirement for controlling the run time of academic exams (MOE, 2009) does not effectively reduce students' workload, and their workload is further aggravated by homework pressure and extracurricular tutoring classes (NACEQ, 2018). Similarly, indicator 17.1 as the lowest important indicator to demonstrate education quality, only reflects migrant student's access to urban schools, rather than their learning outcomes. In fact, the learning outcomes of migrant students are lower than their urban peers, as suggested by the interviewees from school 9. The issues mentioned here will be discussed further in Chapter 7.

5.3.1.2 Organisation and Management

This section encompasses three components involving school leadership (from item 18.1 to 18.8), school management (from item 18.9 to 18.16), and school environment (from item 18.17 to 18.21). Participants expressed their various attitudes towards the importance of each indicator about "organisation and management" to demonstrate education quality.

Table 5.4: Participants' Views on the Importance of Indicators Related to Organisation and Management

School Leadership	Percentage of the Most Important/Important	M	SD
*+18.6 The leaders' team group adequately tackles the practical issues related to students' learning and teachers' teaching	91.49%	4.56	.678
*+18.7 Teachers are always consulted on important decisions made by the school	91.21%	4.54	.735
18.2 School development plans have clear focuses and distribution of responsibilities.	91.76%	4.52	.712
18.8 Families and communities are actively encouraged to support and promote student learning in collaboration with school.	90.94%	4.52	.731
18.1 The school staff shares a common set of beliefs about schooling/learning.	91.21%	4.47	.753
18.4 Headteacher provides parents or guardians with information on their students' performance regularly every term	90.39%	4.45	.745
18.5 Headteachers regularly participate in observing and evaluating teachers' work in class every term.	89.56%	4.45	.746
*-18.3 Headteacher provides parents or guardians with information on the school performance regularly every term	88.74%	4.43	.755
Main Effect	F	P	
	6.225	.000	
School Management			
*+18.11 Teachers are evaluated comprehensively, not solely based on students' academic achievements and the rates of admission to high schools	93.3%	4.57	.709
18.12 Formative assessment results are used as evidence to evaluate students.	90.65%	4.51	.716
18.14 The school provides students' mental health education and services	91.49%	4.51	.716
18.15 Teaching resources are assigned fairly and efficiently across different curriculum areas.	91.21%	4.49	.724
18.13 School builds up comprehensive and dynamic individual records on each student to record their overall progress.	91.49%	4.48	.747
18.16 The internet teaching resources system in school is adequate	92.18%	4.47	.735
18.10 School takes measures to improve teaching and education quality based on feedback given by the inspectors.	89.29%	4.46	.786
*-18.9 All school members are involved in school self-evaluation system.	88.19%	4.44	.823
Main Effect	F	P	
	5.192	.000	
School Environment			
*+18.20 No in-school violent incidence is allowed to incur to school students	92.46%	4.58	.736
18.21 The environment is inclusive for all without discrimination on the grounds of any grouping or status such as gender, ethnicity, age, language, religion, or disability.	91.02%	4.54	.731
18.17 The school creates a positive learning atmosphere through various cultural events	93.02%	4.50	.728
18.18 School layout is fit for purpose.	90.66%	4.47	.754
*-18.19 School environment is adequate in terms of attractiveness and cleanliness.	90.38%	4.47	.751
Main Effect	F	P	
	8.247	.000	

Note: 18.3, n=360; 18.4-18.6, 18.8-18.9, 18.11, 18.15-18.16, 18.19 n=359; 18.17-18.18, n=358. *+: significantly higher rated than item 18.1, 18.3-18.5; item 18.9-18.10, 18.13, and 18.15-18.16; item 18.18 and 18.19. *-: significantly lower rated than item 18.2, 18.6-18.8; item 18.11; and item 18.20 and 18.21.

- School Leadership

According to participants, the most important indicators include items: leadership's role in tackling the practical issues related to students' learning and teachers' teaching (18.6), consultation with teachers on important school decisions (18.7), and the lowest rated

indicators include items: headteachers' delivery of information regarding student performance to parents (18.4), headteachers' participation in classroom teaching observation (18.5), and communicating information of the school performance to parents (18.3). This result was to some extent confirmed through a repeat-measures one-way ANOVA which revealed that there were significant differences between the items 18.6, 18.7 and 18.3.

Indicators 18.6 and 18.7 was perceived to be the most important to demonstrate education quality. This is in alignment with Pigozzi (2006) and Scheerens (1990), who regard that implementing the policies that correspond to teachers' and students' needs is a critical contributor to education quality. Also, a large amount of evidence demonstrates that school effectiveness could be enhanced when staff are involved in cooperative working and decision-making (Sammons, Hillman, et al., 1997). Next, survey participants deemed indicator 18.5 as less important, which can be explained by interviewees' view that headteachers' classroom observation would bring them high pressure, though this indicator (in relation to professional leadership) critically affects school effectiveness. Lastly, indicator 18.3 was lower rated than indicator 18.4 in demonstrating education quality because the interviewees reported that parents would attach more importance to students' academic achievements rather than school's performance in school inspection (see section 6.2.2).

- School Management

According to participants, the most important three indicators include item: comprehensively evaluating teachers (18.11), applying formative evaluation results to student evaluation (18.12), and school's service for students' mental health (18.14), and the least rated indicators include item adequate internet teaching resources (18.16), teachers improving students' learning based on inspection feedback (18.10), and involving all school members in self-evaluation (18.9), with items 18.11 and 18.9 distinguished significantly from a number of other items.

The indicators 18.11 and 18.12 from Shandong province are related to students' and teachers' evaluation methods, respectively. Both of them emphasized that students' summative academic performance cannot be treated as the only indicator to evaluate the performance of teachers and students. The teaching practice and learning outcomes might be affected by both school-level factors and classroom-level factors in the dynamic and ongoing schooling processes where teaching and learning are required to continuously adapt to changes in opportunities and needs (Kyriakides, 2012). The third highest rated indicator regarding students' mental health education and services (18.14) was also related to students' well-

being in addition to indicators related to students' physical health and safety that were highlighted by participants in the last section 5.3.1.1. Pigozzi (2006) and UNICEF (2000) also regarded students' mental health as a key factor to contribute to the framework of education quality.

However, the importance of indicator 18.16 concerning setting in the internet system to support teaching was lower rated than other indicators related to school management, since the use of information technology cannot necessarily bring up active learning, despite its effect on promoting student engagement (Ingram, 2016). Next, indicator 18.10 regarding the implementation of school inspection feedback and indicator 18.9 regarding staff's involvement in school self-evaluation were the lowest rated indicators to demonstrate education quality in terms of school management; here, participants' views varied. This is probably because both indicators are less pertinent to education quality in that successful enactment of feedback from external inspectors and completing school self-evaluation required by the inspectorates essentially depends on consolidating school capacity. To achieve this, it is critical to put continuous leadership efforts on improving professional development, teaching quality and student outcomes (Gu et al., 2018). However, it is very challenging to identify the impact from the implementation of inspectors' feedback and school self-evaluation on substantial changes in education quality (Faubert, 2009).

- School Environment

With regards to the school environment, the most important indicator identified by participants to demonstrate education quality was indicator 18.20 regarding school violence in relation to students' well-being, and the least important indicator was item 18.19 regarding school physical environment, with the significance of these differences confirmed by Bonferroni post hoc tests.

In accordance with UNICEF (2000)' framework, "no violence" referred by indicator 18.20 was particularly reflected on the dimension of "school management". Similarly, since 28th April 2016, China national inspectorates have put addressing violent issues in the schoolyard on the to-do list and all the primary schools and secondary schools in the nation were to be inspected to address and eradicate schoolyard violence (MOE, 2016). Participants' perceptions of school violence to some extent suggest that violent issues were seen as an important factor that could influence the school environment. Although the mean value of indicator 18.17 ranked third among all indicators concerning school environment, there were 93% of participants acknowledging that the learning climate was the most

important/important indicator to demonstrate education quality. Learning climate was also an important factor identified in the previous literature on school effectiveness and school inspection theories to influence education quality (Ehren et al., 2013; Kyriakides & Creemers, 2008; Scheerens, 1990; Van Bruggen, 2010). In comparison, indicator 18.9 related to the attractiveness and cleanness was lower rated than other indicators, which is supported by qualitative evidence (see section 6.5.4.1).

5.3.1.3 Teaching and Learning

In the "teaching and learning" section, three aspects are covered: classroom teaching (survey items 19.1-19.19), teachers' professional development (survey items 19.20-19.32), and students' learning (survey items 19.33-19.39). Participants expressed their various attitudes towards the importance of each indicator about "teaching and learning" to demonstrate education quality.

Table 5.5: Participants' Views on the Importance of Indicators Related to Teaching and Learning

Items	Percentage of the Most Important/Important	M	SD
Classroom Teaching			
*+19.15 All students are treated equally	95.53%	4.57	.598
*+19.12 Students act as the main part of classroom teaching where active, standard-based participation methods are employed	94.97%	4.56	.608
*+19.17 Students' skills of independent thinking, creation and practice are developed.	93.13%	4.55	.605
*+19.3 Teachers make plans with clear teaching goals and address difficulties of delivering the content to achieve effective classroom teaching	94.41%	4.54	.671
19.6 Teachers continuously reflect on the effects and teaching goals that have been realized in teaching process	92.86%	4.54	.663
19.13 Students' emotion and voice are paid attention during classroom teaching, which offers continuous support for student-centred learning.	93.68%	4.53	.620
19.14 Interactive and democrat classroom teaching model is constructed.	92.85%	4.53	.611
19.7 Teachers play a leading role in taking advantage of educational resource to optimize teaching design in the classroom.	93.13%	4.52	.634
19.8 Teachers take measures to help poor students improve academic achievements	92.31%	4.52	.647
19.2 Moral education is attempting to address students' practical issues related to students' self-activation and mental health.	91.21%	4.52	.681
19.4 Teachers refer to a problem from everyday life or work to demonstrate why new knowledge is useful.	92.86%	4.52	.664
19.10 Teachers motivate students' learning interests	91.75%	4.51	.630
19.5 Formal Chinese handwriting, and mandarin should be used in classroom teaching.	92.31%	4.5	.664
19.16 Personal tutoring is applied to students who have special needs.	90.93%	4.49	.651
19.1 School makes full use of traditional festivals and critic historical events to educate students about civic morality.	90.94%	4.46	.727
19.19 Students are able to conduct autonomous, cooperative and explorative learning activities by using information technology.	90.38%	4.45	.696
*-19.11 Explorative and practical homework is advocated to be assigned to students.	89.28%	4.44	.682
*-19.18 Students conduct self-evaluation to help change and improve classroom teaching based on evaluation results.	89.28%	4.43	.694
*-19.9 Teachers believe that all students can learn	87.15%	4.39	.768

Main Effect	F	P	
	7.983	.000	
Teachers' Professional Development			
*+19.20 Teacher concerns, loves and respects students	94.51%	4.62	.571
*+19.21 Teachers' morality is regarded as critical evidence for recruitment and evaluation of teachers	92.31%	4.58	.663
19.31 Teachers' working conditions are adequate.	92.85%	4.55	.645
19.32 The structure of teachers' team is reasonable in relation to teachers' age and subjects.	91.76%	4.51	.713
19.25 School staff regularly has an open discussion about pupils' learning difficulties.	92.58%	4.5	.664
19.24 Teachers regularly collaborate with other teachers to attend preparation for class altogether in an educational research group.	90.66%	4.48	.676
19.28 Model teachers play leading roles in professional development.	90.93%	4.47	.700
19.30 The master of basic educational theories and curriculum standards help teachers build up connections between their major taught subjects with other subjects.	90.66%	4.45	.683
19.26 Teachers regularly observe each other in the classroom and give each other feedback	90.39%	4.44	.699
19.27 Teachers are encouraged to get involved in activities of educational research and academic communication to express opinions.	90.66%	4.41	.731
19.29 Model classes and teaching competitions improve teachers learning and professional abilities.	89.83%	4.41	.723
*-19.23 Teachers' abilities to develop and implement school-based curriculum have been increased continuously.	83.79%	4.27	.877
*-19.22 Teachers are required to publish papers in assigned journals	69.83%	3.92	1.183
Main Effect	F	P	
	56.149	.000	
Students' Learning			
*+19.36 Thinking and reasoning processes are more important than specific curriculum content.	92.18%	4.51	.697
19.39 Pupil success is celebrated in this school every term.	93.85%	4.49	.677
19.37 Students regularly attend various art and cultural activities in school.	89.01%	4.45	.715
19.38 Students regularly attend various practical activities in community and practice base organised by the school, such as labour service and technical training to develop students' labour techniques.	90.66%	4.45	.723
19.35 School makes full use of curriculum resource in and out school to develop distinctive school-based curriculum system to satisfy students' overall development and different characteristics.	89.01%	4.42	.736
*-19.34 The system of optional courses in school is carried on in practice.	89.39%	4.37	.808
*-19.33 Students' career education is regularly and adequately conducted.	89.11%	4.36	.786
Main Effect	F	P	
	11.354	.000	

Note: n=358; *+: significantly higher rated than item 19.1, 19.9, 19.11, 19.18, and 19.19; item 19.22-19.30; and item 19.33-19.35. *-: significantly lower rated than item 19.2-19.4, 19.6-19.8, 19.10, 19.12-19.15, and 19.17; the rest of the items; and item 19.35-19.39.

- Classroom Teaching

In terms of classroom teaching, the four most important indicators were equity of classroom teaching (19.15), students' participation in classroom teaching (19.12), development of students' independent thinking abilities (19.17), and structured teaching (19.3). The three least important indicators were teachers' belief that all students can learn (19.9), students' self-evaluation to improve teaching (19.18), and types of students' homework (19.11) to demonstrate education quality. A repeat-measures one-way ANOVA rejected the hypothesis

of no differences in item ratings, and pairwise significant differences detected by Bonferroni post-hoc tests are indicated in Table 5.5.

The result that item 19.15 “teacher treats each student equally” was the most important indicator of classroom teaching to demonstrate education quality was similarly indicated by Pigozzi (2006) who was concerned with how different students in the same group were treated. This resonates also in that one of the key concepts of education quality in previous theories was a focus on equity in the schooling process apart from educational inputs. The indicators 19.12 and 19.17 emphasised students’ participation in classroom teaching, since students as important participants in teaching-learning processes (Pigozzi, 2006), play active roles in strengthening teaching effectiveness. In the education quality frameworks of Pigozzi (2006) and UNICEF (2000), teachers are required to use student-centred teaching methods to facilitate student-centred learning. When students are involved in student-centred practices where their voices are honoured, a higher level of thinking is encouraged, and individual needs are satisfied; as a result, a higher level of academic efficacy would be achieved (Meece, 2003).

Although student-centred teaching pedagogy has been advocated and applied in Shandong province, it is unlikely for any teacher to only implement either a student-centred approach or a teacher-led method in classroom teaching (Garrett, 2008). Knowledge is not delivered to students by teachers directly, but rather it is constructed by teachers and students together in a learning community to share understanding (Brophy, 1999). Indicator 19.14 with a focus on student-teacher interaction during classroom teaching was also given great importance by participants in demonstrating education quality. Indicator 19.3 precisely describes essential components of structured teaching that is acknowledged to have significant impacts on education quality according to the findings of the previous research (Creemers & Kyriakides, 2010a; Pigozzi, 2006; Scheerens, 1990).

On the contrary, the indicator 19.9 “teachers believe that all students can learn”, which represents an attitude and even an expectation of teachers for students, was seen as the least important indicator to demonstrate education quality. Here, the views of participants varied the most among all indicators in relation to "classroom teaching". The second and third lowest-rated indicators were 19.18, with a focus on the roles of students’ self-evaluation in improving classroom teaching, and 19.11, regarding assigning explorative homework to students. The reasons that why the three indicators were deemed to be the least important in demonstrating education quality will be discussed further in Chapter 7.

- Teachers' Professional Development

In view of participants, the most important two indicators are that "teachers are concerned for, love and respect students" (19.20), "teachers' morality is regarded as critical evidence for recruitment and evaluation of teachers" (19.21), and "teachers' working conditions are adequate" (19.31); and the least important two indicators are "teachers' abilities to develop and implement school-based curriculum have been increased continuously" (19.23) and "teachers are required to publish papers in assigned journals" (19.22) in terms of teachers' professional development. (Post-hoc tests found significantly different ratings for items 19.20, 19.21, 19.22, and 19.23, as shown in Table 5.5.)

From the results above, both indicators 19.20 and 19.21 are concerned with teachers' morality. They were prominently approved by participants who had been deeply influenced by China's traditional point of view that teachers' morality plays a critical role in educating and nurturing students since teachers' behaviour and language as models would potentially lead students to learn and imitate. Indicator 19.31 regarding the adequate working conditions of teachers are related to teacher motivation, which has been identified as a key contributor to education quality (The World Bank, 2018; UNESCO, 2016). Indicator 19.23 regarding continual improvement in teachers' abilities to deliver the curriculum was significantly lower rated than other indicators, which might stem from the lack of either professional guidance or autonomy for developing school-based curriculum (Dello-lacovo, 2009). Similarly, indicator 19.22 on teachers' journal publication was rated lower than the other indicators related to professional development. This result was supported by interviewees and will be discussed further in Chapter 7.

- Students' Learning

In the view of participants, the most important three indicators are "thinking and reasoning processes are more important than specific curriculum content" (19.36), "pupil success is celebrated in this school every term" (19.39), and "students regularly attend various art and cultural activities in school" (19.38), and the least important three indicators are regarding setting in school optional courses (19.34), students' career education (19.33) and developing school-based curriculum to promote students' overall development (19.35) in terms of students' learning. The results of Bonferroni post hoc tests show that item 19.36 was significantly higher rated, and item 19.34 and 19.33 were significantly lower rated than most of the items.

In general, the statistical evidence above indicates that indicators regarding encouraging students to attend social and arts activities that are helpful to improve students' learning and thinking abilities are more important than indicators concerning curriculum content itself in demonstrating education quality. This finding illustrates that participants have moved their attention from imparting mere cognitive knowledge from a textbook to strengthening students' learning processes. This reflects a self-regulated way of learning as required by society, according to the EU (2002), which assumes that students are responsible for their own learning and should act positively in the learning process (Zimmerman, 2001).

The result that the indicator regarding celebrating students' success (19.39) was perceived as important to demonstrate education quality is in line with Scheerens (1990)'s theory that reinforcement is an effective factor for students' achievement, since students' learning motivation could be enhanced by providing frequent monitoring and feedback. Celebrating pupils' success signifies a positive feedback from schools where pupils' achievements are recognised, which could become driving force for students to make more progress. As was identified in Scheerens (1990)'s research, the quality of school curricula in terms of content covered and formal structure effectively contributes to students' academic achievement. Nevertheless, the interviewees were also concerned with the feasibility of these indicators in different regional contexts (see section 6.3.2).

5.3.1.4 Outcome

In the "outcome" section, students' social outcomes (survey items 20.5-20.15, 20.16, and 20.20), academic achievements (survey items 20.19 and 20.21), and school outcomes (survey items 20.18 and 20.17) are included. Participants expressed their various attitudes towards the importance of each indicator about "outcome" to demonstrate education quality.

In general, participants' perceptions of all 21 indicators in terms of outcome are very positive with little discrepancy between each other. All the indicators and with one exception, were perceived by more than 90% of participants to be the most important in demonstrating education quality. Nevertheless, a repeat-measures one-way ANOVA revealed significant variation in the perceived importance of the items in this section.

Table 5.6: Participants' Views on the Importance of Indicators Related to Outcome

Outcome	Percentage of the Most Important/Important	M	SD
*+20.5 Students feel safe at school	94.42%	4.6	.589
20.2 Learners are enthusiastic about learning	94.42%	4.58	.615
20.1 Students have good learning habits and methods.	92.59%	4.58	.625
20.8 Learners have developed right moral values and attitude, such as having good manners, being diligent and thrifty, protecting the environment, etc.	94.69%	4.58	.594

20.3 Learners enjoy learning.	92.85%	4.57	.598
20.7 Learners are able to think critically to express their views, thoughts, and ideas.	92.86%	4.57	.594
20.10 Learners have abilities to control emotion.	92.85%	4.57	.608
20.11 Learners are optimistic to overcome difficulties and frustration.	93.13%	4.57	.603
20.12 Most students are able to communicate and collaborate with others in teamwork.	92.58	4.57	.603
20.9 Learners have sense of self-discipline	93.4%	4.56	.599
20.13 Students develop a good relationship with their classmates and teachers	94.41%	4.56	.621
20.14 Students can respect, concern and help others.	92.85%	4.56	.623
20.4 Learners enjoy being at school.	93.41%	4.55	.591
20.6 Students are able to use existing knowledge to frame, analyse and solve problems.	92.31%	4.54	.619
20.15 Students have knowledge and skills to develop healthy living habits.	92.31%	4.54	.619
20.18 Students are satisfied with school education quality.	92.04	4.53	.616
20.16 Each student masters some kinds of physical sports techniques.	90.93%	4.51	.660
20.17 Parents are satisfied with school education quality.	92.03%	4.51	.616
20.20 Students' overall well-being is satisfactory.	90.38	4.49	.643
*-20.19 Value added evaluations of students' academic development have increased.	90.39%	4.48	.660
*-20.21 The proportions of students who are admitted to higher school are satisfactory	88.74%	4.46	.667
Main Effect	F	P	
	5.525	.000	

Note: n=358; *+: significantly higher rated than item 20.16-20.17 and 20.19-20.21 *-: significantly lower rated than item 20.1-20.3, 20.5, 20.8, 20.11 and 20.12.

In view of participants, the three most important indicators were related to students' feeling of safety (20.5), enthusiasm of learning (20.2), leaning habits and methods (20.1), and moral values and attitudes (20.8); and two least important indicators were regarding students' value-added academic achievement (20.19), and admission rate for senior high school (20.21).

According to participants' views, students' safety as a basic welfare need at school was deemed to be the most important indicator to demonstrate education quality in terms of "outcome". Similar with participants' views on school environment indicators (in section 5.3.1.2), non-violence is seen as the most important indicator to evaluate the school environment. Thus, it suggests that students' welfare was recognised by participants from Shandong Province as an important focus of school inspection indicators to demonstrate education quality.

From participants' views, we see that students' values of morality (indicator 20.8) and attitudes towards learning (indicators 20.2, 20.1, and 20.3) were higher rated than the other indicators to demonstrate education quality in relation to student non-academic outcomes. Students' moral values are particularly emphasised in the national and provincial school inspection standards in China, in line with the perspectives of Pigozzi (2006) who brought "values" into the dimension of students' outcome by emphasising students' essential moral characters. Participants' high recognition of students' enthusiasm about learning is consistent with the important role of learning motivation in improving students' outcomes. Butler and

Winne (1995)'s research, for example, provided evidence that students' learning motivation was necessary for promoting students' learning. In addition, indicators in relation to social outcomes such as communication and collaboration with others, and maintaining good relationships with classmates and teachers, that derived from the previous international literature (Ehren & Dijkstra, 2014; Pigozzi, 2006; Scheerens & Ehren., 2016; UNICEF, 2000) were also more strongly approved of by participants compared with indicators regarding students' academic outcomes.

Conversely, indicator 20.19 and 20.21 related to academic outcome were rated as the least important to demonstrate education quality. This result indicates that students' admission rates for senior high school oriented towards academic achievement was not as important as students' overall development, although more than 90% of participants still attached great importance to rates of admission to a senior high school, likely due to the existing exam-oriented evaluation system in China. Most participants seem to have been aware that indicators regarding students' well-being, learning abilities, and other social skills are equally if not more important than indicators regarding academic achievements to demonstrate education quality and to satisfy students' needs for overall and sustainable development in the future.

5.3.2 Are there any differences in the views of participants with Junior/Senior professional titles from the urban area and rural area?

5.3.2.1 The Main Effects of Rural/Urban and Junior/Senior Status on Participants' Perceptions

To address this research question, a two-way ANOVA was performed to examine if the perceptions of participants from R/U area are also affected by perceptions of participants with the S/J professional title.

Table 5.7: Significant Results of Two-way ANOVA in R/U and J/S on Indicators

Indicator	Mean				F (p)		
	R	U	J	S	R/U	J/S	IE
Compliance with Legal Regulations							
17.3 In order to release students' learning pressure, the times of running academic exams should comply with relevant laws and regulations.	4.56	4.35	4.50	4.36	**4.645 (.032)**	1.918 (.167)	.232 (.631)
Organisation and Management in School							
18.12 Formative assessment results are used as evidence to evaluate students.	4.54	4.49	4.61	4.44	.589 (.443)	**4.484 (.035)**	.076 (.783)
18.13 School builds up comprehensive and dynamic individual records on each student to record their overall progress.	4.57	4.44	4.61	4.41	2.281 (.132)	**5.662 (.018)**	.009 (.924)
Teaching and Learning							
19.4 Teachers refer to a problem from everyday life or work to demonstrate why new knowledge is useful.	4.55	4.50	4.61	4.46	.711 (.400)	**5.067 (.025)**	.545 (.461)
19.5 Formal Chinese handwriting, and mandarin should be used in classroom teaching.	4.51	4.50	4.64	4.42	.125 (.724)	**8.133 (005)**	.127 (.722)

19.6 Teachers continuously reflect on the effects and teaching goals that have been realized in teaching process	4.56	4.51	4.64	4.48	.129 (.720)	**4.994 (.026)**	.221 (.638)
19.7 Teachers play a leading role in taking advantage of educational resource to optimize teaching design in the classroom.	4.56	4.51	4.62	4.46	.637 (.425)	**4.834 (.029)**	.055 (.815)
19.9 Teachers believe that all students can learn.	4.42	4.37	4.55	4.29	.388 (.534)	**8.494 (.004)**	060 (.806)
19.16 Personal tutoring is applied to students who have special needs.	4.68	4.41	4.61	4.41	.294 (.588)	**8.923 (.003)**	.218 (.641)
19.17 Students' skills of independent thinking, creation and practice are developed.	4.58	4.55	4.64	4.50	.805 (.370)	**4.544 (.034)**	.145 (.703)
19.21 Teachers are required to publish papers in assigned journals.	3.96	3.83	4.23	3.73	.761 (.384)	**12.180 (.001)**	.037 (.847)
19.22 Teachers' abilities to develop and implement school-based curriculum have been increased continuously.	4.27	4.27	4.42	4.19	.031 (.861)	**5.483 (.020)**	0.82 (.775)
19.23 Teachers regularly collaborate with other teachers to attend preparation for class altogether in an educational research group.	4.50	4.47	4.61	4.41	.686 (.408)	**10.084 (.002)**	3.158 (.076)
19.24 School staff regularly has an open discussion about pupils' learning difficulties.	4.56	4.48	4.62	4.43	1.847 (.175)	**7.894 (.005)**	1.020 (.313)
19.25 Teachers regularly observe each other in the classroom and give each other feedback	4.50	4.42	4.59	4.36	1.970 (.161)	**10.408 (.001)**	.901 (.343)
19.26 Teachers are encouraged to get involved in activities of educational research and academic communication to express opinions.	4.47	4.39	4.63	4.33	1.094 (.296)	**7.048 (.008)**	.025 (.876)
19.27 Model teachers play leading roles in professional development.	4.56	4.42	4.64	4.37	2.800 (.095)	**10.851 (.001)**	.013 (.911)
19.28 Model classes and teaching competitions improve teachers learning and professional abilities.	4.46	4.39	4.56	4.33	.532 (.466)	**6.659 (.010)**	.236 (.627)
19.31 The structure of teachers' team is reasonable in relation to teachers' age and subjects.	4.62	4.46	4.75	4.42	3.767 (.053)	**7.132 (.008)**	.060 (.807)
19.34 The system of optional courses in school is carried on in practice.	4.40	4.35	4.52	4.27	.273 (.602)	**6.678 (.010)**	.012 (.912)
19.33 School makes full use of curriculum resource in and out school to develop distinctive school-based curriculum system to satisfy students' overall development and different characteristics.	4.50	4.38	4.54	4.35	1.857 (.174)	**4.986 (.026)**	.007 (.935)
19.35 Thinking and reasoning processes are more important than specific curriculum content.	4.57	4.48	4.73	4.45	1.839 (.176)	**4.558 (.033)**	.724 (.395)
Outcome							
20.10 Learners have abilities to control emotion.	4.70	4.52	4.63	4.54	**4.494 (.035)**	1.193 (.276)	.475 (.491)
20.11 Learners are optimistic to overcome difficulties and frustration.	4.70	4.51	4.59	4.55	**8.071 (.005)**	.536 (.465)	.144 (.705)
20.12 Most students are able to communicate and collaborate with others in teamwork.	4.73	4.52	4.63	4.54	**5.043 (.025)**	1.563 (.212)	.089 (.765)
20.16 Parents are satisfied with school education quality.	4.58	4.48	4.62	4.45	2.213 (.138)	**5.786 (.017)**	.006 (.941)
20.17 Students are satisfied with school education quality.	4.57	4.51	4.63	4.46	.991 (.320)	**5.951 (.015)**	.171 (.679)
20.18 Value added evaluations of students' academic development have increased.	4.53	4.46	4.58	4.42	.894 (.345)	**4.195 (.041)**	.031 (.860)
20.19 Students' overall well-being is satisfactory.	4.54	4.47	4.61	4.42	1.147 (.285)	**7.168 (.008)**	.009 (.924)

Note: R=Rural, U=Urban, J=Junior, S=Senior, IE=Interaction Effect. p-values in parentheses. Differences with $p<.05$ highlighted in bold.

Rural participants tended to attach more importance to indicators regarding compliance with legal regulations (17.3) and outcomes (20.10, 20.11, and 20.12) and this held equally among junior and senior staff. One potential reason for why participants in rural areas gave higher scores to item 17.3 concerning the times of running academic exams is in the significant

inequity between urban and rural schools. There was a significant main effect of the junior/senior professional title on participants' perceptions of 25 indicators ($p<0.05$) (see table 8) regarding school organisation and management, teaching and learning, and students' outcomes. The results of the two-way ANOVA demonstrate that, in all cases, participants with junior professional titles attached more importance to these indicators than staff with senior titles, and this held equally in both urban and rural areas.

Kipnis (2001)'s research in Shandong province found rural students had no choice but to dedicate themselves to long hours of learning if they strove to obtain an urban job and urban household registration which could bring about a high-quality urban life (Gu, 2000). Therefore, as an essential measure for reducing students' learning burden proposed by the MOE (2018), setting limits on the run time of exams might be necessary to release the pressure placed on rural school students who are likely to have a greater need for a more relaxed and supportive environment where students can devote time to inquiry and group discussion and collaborate more with other peers in learning (An et al., 2007).

Regarding school management, junior teachers attached more importance than senior teachers to indicators regarding school formal evaluation (18.12) and using dynamic individual records to record each student's overall progress (18.13), which could be explained by interview data (see section 6.5.3 in Chapter 6). Participants with junior professional titles also gave higher scores to indicators of classroom teaching and learning (10 indicators) and the indicators related to teachers' professional development (9 indicators) than participants with senior professional titles. This might be because older and more experienced senior teacher have greater challenges and less motivation in accepting and applying innovative educational concepts to teaching practice (see section 3.3.2.2). Additionally, in comparison with senior teachers, junior teachers demonstrated higher approval for parents (20.16) and students' satisfaction with school education (20.17), students' value-added outcome (20.18), and students' overall well-being regarding students' outcome (4 indicators). In China, teachers are committed to students' learning both inside and outside the classroom through home visits and phone calls, and younger teachers tended to take more responsibilities for school-family connections (Chen, 2014). Moreover, junior teachers seemed to be more open to a new education vision with a focus on using innovative pedagogy to improve teaching quality and developing students' versatile abilities and well-being. Generally, these results suggest that junior teachers have different perceptions from senior teachers on the importance

of each indicator to demonstrate education quality, which will be discussed further in Chapter 7.

5.3.1.3 The Main Effects of the School on Participants' Perceptions

A one-way ANOVA was performed to examine if there are differences of perspectives among participants from 10 schools in terms of school inspection indicator. The result of the one-way ANOVA showed that there was a significant effect of schools on participants' perceptions of indicator regarding compliance with legal regulation (17.1), classroom teaching (19.9), and teachers' professional development (19.20, 19.22, 19.28, 19.29, and 19.32). The results of the Bonferroni post hoc tests revealed that the only systematic pattern in the pairwise tests is related to School 9 which rated five items above significantly higher than the rest of schools (see table 5.8).

Table 5.8: Significant Result of One-way ANOVA for 10 Schools in Indicator

Indicator	F	df	P
Compliance with Legal Regulation			
17.1 Children of rural migrant workers in cities are normally accepted in compulsory education equally to urban children	2.194	9, 353	.022
Teaching and Learning			
19.20 Teacher concerns, loves and respects students.	2.894	9, 348	.003
19.22 Teachers are required to publish papers in assigned journals	3.784	9, 348	.000
19.28 Model teachers play leading roles in professional development.	2.801	9, 348	.003
19.29 Model classes and teaching competitions improve teachers learning and professional abilities.	2.564	9, 348	.007

The item 17.1 regarding the regulation for accepting children of rural migrant workers to study in urban schools for compulsory education was significantly higher rated by participants from school 9 than participants from the other schools. This is possibly because more than half the students' in school 9 are children of rural migrant workers who are working in Q city according to interviewees. Thus, the indicator regarding the equal rights of children of rural migrant workers to access compulsory education might be more important for participants in school 9 in order to demonstrate education quality.

Indicators with focuses on paper publication (19.22), roles of model teacher (19.28) and model classes (19.29) in enhancing teachers' professional development were significantly higher rated by participants from school 9 than other schools. According to interviewees from school 9, model teachers and model classes were seen as significant incentives to stimulate teachers' enthusiasm for work, especially when teachers felt passive about improving students' academic performance after long-term patterns of overwork. But through learning

from model teachers and attending model class competitions, teachers could be somewhat inspired and improve their motivation for working (see section 6.5.2 in chapter 6).

5.4 Research Question 3: What are stakeholder perceptions on the importance of different approaches and procedures used in school inspection in order to demonstrate and improve education quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

5.4.1 What are stakeholder perceptions on the importance of different approaches and procedures used in school inspection in order to demonstrate and improve education quality?

Participants' perspectives on the process of school inspection implementation are reported in relation to twelve common inspection procedures employed by external school inspection to achieve a high-quality evaluation process. More specifically, the proportion of participants who agreed and strongly agreed with each statement regarding both positive and negative consequences in education quality brought by each procedure/approach used in school inspection are combined to be reported in the text below. In order to further identify the differences among participant perceptions for each statement about the inspection procedure and approach, a repeat-measures one-way ANOVA test was performed.

5.4.1.1 Approaches/Procedures

Table 5.9: Participants' Views on Approaches/Procedures of School Inspection

Procedures	Percentage of the Most Important/Important	M	SD
*+21.5 Publication of school performance data	79.61%	4.19	.857
*+21.2 Pupils' satisfaction surveys	78.77%	4.18	.851
*+21.3 Targets set by the school	78.21%	4.17	.850
21.1 Parent satisfaction surveys	75.7%	4.11	.929
21.4 Use of externally set performance indicators	75%	4.1	.893
21.6 Comparison of performance with schools of similar socioeconomic characteristics	74.73%	4.1	.941
21.12 Rewards and sanctions received from the inspectors	72.81%	4.08	.935
21.8 Written feedback	74.3%	4.04	.945
21.11 School self-evaluation report	73.63%	4.03	1.002
21.7 Class observation by external inspectors	71.15%	4.02	.967
21.9 Verbal feedback	74.31%	4.02	.933
*-21.10 How frequently that the schools are visited each term	68.72%	3.91	1.069
Main Effect	F	P	
	11.458	.000	

Note: n=358; *+: significantly higher rated than item 21.7-21.12; *-: significantly lower rated than the rest of items

In the view of participants, the most important three items are related to publication of school performance data (21.5), pupil's satisfaction surveys (21.2), and targets set by schools (21.3),

and the three least important items are regarding class observation (21.7), verbal feedback (21.9), and frequency of school inspection (21.10). A repeat-measures one-way ANOVA revealed significant variation in the perceived importance of the items in this section.

Based on the statistical result shown above, publication of school performance data is the most important procedure to demonstrate education quality. Publishing data on school performance is an effective way to enhance the accountability of school inspections, particularly in that a negative performance report might urge low-performing schools to strive for improvement (Ozga, 2013). Furthermore, "targets set by the school" was also a highly approved inspection procedure by participants in demonstrating education quality. On the other hand, "how frequently that the schools are visited each term" (68.72%) was regarded as the least important procedure of school inspection to demonstrate education quality. In fact, the frequency of school visits depends on the needs of schools (Whitby, 2010). For those failing schools, more school visits would be necessary to supervise their improvement; for high-performing schools, the frequency of school visits should not be the main concern of school inspectors (Ehren et al., 2015). According to the perspective of participants, although "verbal feedback" (74.31%) and "written feedback" (74.3%) provided by external inspectors were relatively lower rated than other procedures, in general more than 70% of participants thought these procedures are the most important/important to demonstrate and improve education quality. This result will be discussed further in chapter 7.

5.4.1.2 School Targets

Table 5.10: Participants' Views on School Targets

School Targets	Percentage of Strongly Agree/Agree	M	SD
22.5 A focus on quantifiable targets distorts the purposes of education	69.27%	3.96	.932
22.3 School targets give an accurate indication of the school's efforts to improve performance	68.44%	3.93	.923
22.2 Setting targets leads to school improvement	68.72%	3.91	.941
22.1 Current performance targets are appropriate for evaluating the quality of education	65.92%	3.86	.922
*-22.4 Target setting is not an important issue for schools	54.47%	3.6	1.061
Main Effect	F	P	
	18.800	.000	

Note: n=358 *-: significantly lower rated than the rest of items.

In the view of participants, the highest and lowest rated two statements regarding the negative consequences of school target setting were related to 22.5 "a focus on quantifiable targets distorts the purpose of education" and 22.4 "target setting is not an important issue for schools". The lower rated three statements regarding the positive consequences of school target setting on education quality included items 22.3 "school targets give an accurate

indication of the school's efforts to improve performance", 22.2 "setting targets leads to school improvement", and 22.1 "current performance indicators are appropriate for evaluating the quality of education". This result was verified through the repeat-measures one-way ANOVA which shows that there were significant differences in participants' perceptions of each statement regarding the consequences of school target setting employed in school inspection to improve education quality. The results of Bonferroni post hoc tests indicate that item 22.4 was significantly lower rated than the rest of statements in this block.

Based on the responses of participants, item 22.5 was the highest rated consequence of school targets. Participants highlighted the negative consequence of school target-setting on inspection quality suggesting that a one-sided focus on realising final targets is bound to ignore the fundamental goals of education. Although setting school targets exerts pressure on schools to reach goals, these goals should align with general education targets by taking both quantitative and qualitative goals into account. When quantifiable performance is overemphasized, other unquantifiable aspects might be ignored at the cost of school objectives as a whole (Nelson & Ehren, 2014). Nevertheless, regarding statement 22.4, that target setting is not an important issue for schools, the rate of participants' approval (54%) is noticeably lower than the rest of the statements, including statements (22.3, 22.2, and 22.1) regarding the positive consequences brought by school target setting. Participants' perceptions indicate that despite the negative consequence from inappropriate application of school target setting (as item 22.5 demonstrated above), school target setting as a whole is still important to demonstrate and improve education quality, but the over-reliance on quantifiable target setting should be avoided.

5.4.1.3 External School Inspection

Table 5.11: Participants' Views on External School Inspection

External School Inspection	Percentage of Strongly Agree/Agree	M	SD
*+23.1 School inspection is necessary to monitor the range and extent of education quality	66.48%	3.86	.979
*+23.2 School inspection improves the quality of classroom teaching	63.97%	3.81	1.023
23.4 During inspection visits, teachers in your schools were prepared and better structured your lectures to reach inspection standards	61.17%	3.70	1.039
23.3 School inspection resulted in schools fabricating documents used for school inspection in order to reach inspection standards	56.42%	3.63	1.082
*-23.5 School inspection required teachers and headteachers to spend too much time in preparation for a school visit, and made them distracted from teaching and learning	53.91%	3.51	1.156
Main Effect	F	P	
	13.512	.000	

Note: n=358; *+: significantly higher rated than item 23.3-23.5; *-: significantly lower rated than item 23.1, 23.2, and 23.4.

According to participants, the positive consequences of school inspection for monitoring the range and extent of education quality (23.1) and improving the quality of classroom teaching (23.2), were the highest rated. The negative consequences of school inspection due to fabrication of documents used for school inspection (23.3), better structuring lectures to reach inspection standards (23.4), and the requirement for teachers and headteachers to spend too much time on preparation for a school visit (23.5) were rated lower than the other indicators. The results of Bonferroni post hoc tests indicate that item 23.1 and 23.2 were significantly higher rated and item 23.5 was significantly lower rated than the rest of statements in this block. Generally, the positive statements regarding the positive consequences of external school inspection were rated higher by participants than the statements regarding the negative consequences of school inspection.

5.4.1.4 Well-being

Table 5.12: Participants' Views on Consequence of External School Inspection for Personal Well-being

Well-being	Percentage of Strongly Agree/Agree	M	SD
26.4 When my school is inspected every term, my workload is increased to prepare for inspection	65.64%	3.73	.949
26.3 When my school is inspected every term, I feel additional pressure	63.13%	3.71	.946
26.1 I feel pressure to improve my teaching as a result of the last inspection visit	62.29%	3.69	.917
26.2 I feel pressure for my school overall to do well on the inspection standards	56.98%	3.63	.978
Main Effect	F	P	
	39.553	.050	

The highest rated weaknesses of school inspection process were reflected in generated workload (26.4) and increased pressure on teachers (26.3), and the lowest rated weaknesses were focused on the pressure for school to do well (26.2) and the pressure to improve teachers' own teaching (26.1). Although the result of the repeat-measures one-way ANOVA shows that there was no significant main effect of each statement regarding participants' perceptions of well-beings in this block, a majority of participants report negative consequences, but an important minority (more than a third) do not.

In this research, participants' perceptions of the weaknesses of external school inspection as affecting participants' well-being were examined. However, the pressure of improving schools' overall performance attracted the least agreement from participants, which implies that participants paid more attention to workload and pressure brought to individuals than what was brought to their schools. This was also demonstrated by the result in Table 5.11 that 54% of participants agreed that teachers and headteachers had to spend a large amount of time in preparation for school inspection. Participants' workloads increased, and greater

pressure could be derived from increased time spent in preparing for school inspection. As a whole, more than half of participants confirmed that external school inspection to some extent increased participants' workload and initiated pressure that could do harm to their well-being, which was consistent with interviewees' perspectives (see section 6.3.2.4).

5.4.1.5 Internal School Self-evaluation

Table 5.13: Participants' Views on Internal School Self-evaluation

Internal School Self-evaluation	Percentage of Strongly Agree/Agree	M	SD
24.7 Internal school inspection is carried out properly in this school in line with published criteria.	70.11%	3.92	.864
24.1 In general, internal self-evaluation is beneficial for improving teaching.	71.5%	3.9	.923
24.4 Internal self-evaluation is beneficial for improving students' experience.	69.27%	3.9	.907
24.6 Internal self-evaluation is beneficial for improving overall performance of school.	67.32%	3.86	.925
24.5 Internal self-evaluation is beneficial for improving students' academic outcomes.	67.59%	3.85	.952
*-24.3 School self-evaluation is just a bureaucratic exercise.	56.98%	3.59	1.019
*-24.2 There is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school.	48.6%	3.35	1.089
Main Effect	F	P	
	39.553	.000	

Note: n=358; *-: significantly lower rated than the rest of items;

Most countries perceive school self-evaluation as "an ongoing and inclusive process" (McCrone et al., 2009, p. iv) driven by a developmental impulse could complement an external school inspection that is both formative and summative in nature (Whitby, 2010). However, self-evaluation might also lead to undesirable consequences, such as adopting the strategic behaviour of measure fixation to reach inspection standards in self-evaluation scores, instead of realising underlying goals of quality improvement (Nelson & Ehren, 2014).

According to participants' responses, 70% of participants indicated that internal school inspections were carried out properly in their school in line with published criteria, which demonstrates that participants were generally satisfied with the implementation of school self-evaluation in practice. 72% of participants recognised the strength of self-evaluation in terms of improving classroom teaching. In research conducted in Ireland by McNamara and O'Hara (2006), teachers who were interviewed held positive attitudes towards the impacts of internal self-evaluation on promoting school improvement. Emerging evidence states that teachers are willing to challenge each other and to utilize the outcomes constructively when they are not exposed to risks of external criticism. The role of school self-evaluation as a bureaucratic exercise was rated significantly lower than its positive strengths in improving students' experience (24.4) and overall performance of school (24.6). Consistently, only less

than half of the participants agreed that it was not necessary to conduct formal internal self-evaluations. Thus, it can be implied that in general that participants showed their approval of the advantages of school self-evaluation and indicated its value to demonstrate inspection quality. However, there were still many participants doubting its practical effects on improving education quality and ensuring inspection quality. The reason for this will be explained further (see section 6.3.2.2).

5.4.1.6 Feedback

Table 5.14: Participants' Views on Feedback of External School Inspection

Feedback	Percentage of Strongly Agree/Agree	M	SD
*+25.4 The school in the main will act on the feedback received from the inspectors.	70.39%	3.93	.868
25.1 The feedback provided to the teacher during the last inspection visit was insightful to improve classroom teaching.	66.76%	3.83	.877
25.5 Inspection generated useful feedback for teachers themselves to improve their teaching practice.	65.36%	3.83	.924
25.3 The Inspectorate identified additional weaknesses that the school had not identified.	65.09%	3.8	.884
25.2 the inspectorate identified additional strengths that the school had not identified.	64.52%	3.8	.918
Main Effect	F	P	
	9.007	.000	

Note: n=358; *+: significantly higher rated than the rest of items;

Numerous research studies have claimed that feedback has a great impact on school improvement (Ehren & Visscher, 2008; McCrone et al., 2009), since feedback provides some suggestions and appropriate strategies for school improvement in order to satisfy the inspection standards (Coe, 2002). Thus, education inspectorates assume that schools will reflect on the feedback, improve schooling based on it, and carry out ongoing improvement strategies in practice (Ehren et al., 2015). The results in Table 5.14 indicate that item 25.4, on schools' action on the feedback from inspectors, was significantly higher rated ($p<.01$) than the rest of the statements regarding the strengths of feedback in this block.

Schools' implementation of inspector feedback was highlighted by participants, which reflects schools' respect for school inspections' role as accountability. The strengths of feedback regarding improving classroom teaching (25.1) and teachers' teaching practice (25.5) were also recognised by participants suggesting that most participants were satisfied with the quality of feedback obtained during the last school inspection to improve classroom teaching and teachers' individual teaching practice. From the perspective of Schildkamp and Visscher (2010a), good quality feedback should be adapted to the needs of the school by offering teachers individual feedback and indicating how improvements can be made. In Chapman (2001a) case study, only 20% of teachers thought that feedback from inspectors

strengthened their intentions to change in teaching practice. Conversely, in this research, feedback from external inspectors was deemed by 65% of participants to be useful for teachers to improve their teaching practice.

5.4.1.7 School Inspection Standards

Table 5.15: Participants' Views on School Inspection Standards

School Inspection Standards	Percentage of Strongly Agree/Agree	M	SD
*+27.2 Inspection standards improved self-evaluation processes of the school.	70.11%	3.90	.780
*+27.1 School inspection standards improved evaluation and supervision of teachers.	71.23%	3.89	.772
27.6 The preparation for the inspection visit based on the prescribed inspection standards led to improvement in leadership, management, organisation in their schools.	66.48%	3.83	.822
27.5 The preparation for the inspection visit based on the prescribed inspection standards led to improvement changes in the teaching and learning in your schools.	64.25%	3.79	.851
*-27.4 School inspection standards had resulted in narrowing curriculum and instruction strategies.	42.46%	3.20	1.075
*-27.3 Teachers in your schools were discouraged from experimenting with new teaching methods were not fitting in the scoring rubric of the Inspectorate.	41.62%	3.17	1.122
Main Effect	F	P	
	99.259	.000	

Note: n=358; *+: significantly higher rated than item 27.3-27.5; *-: significantly lower rated than item 27.1 and 27.2.

In view of participants, the highest rated three strengths of school inspection standards are reflected on improving self-evaluation process (27.2), improving supervision and evaluation of teachers (27.1), and improving school leadership, management, and organisation (27.6). The lowest rated two weaknesses of standards are regarding discouraging teachers from experimenting with new teaching methods (27.3) and narrowing curriculum and instruction strategies (27.4). This result was supported by the repeat-measures one-way ANOVA, as shown in Table 5.15.

The highest rated two positive consequences of inspection standards in light of improving evaluation and supervision of teachers and self-evaluation processes were validated in previous research. Researchers from England uncovered that national standards put high expectations on the external accountability, which had been accepted by teachers as one part of professionalism (Storey, 2007; Walker et al., 2011). Thus, the supervision and evaluation of teachers have been strengthened by implementing national regulations and agreements and accepting external accountability (Berry, 2012). In Ehren et al. (2013)' research, the establishment of concise expectations and standards for education quality had a prominent influence on improving internal self-evaluation and capacity building of the school. In this research, nearly half of participants admitted that school inspection standards had resulted in

narrowing curriculum and instruction strategies and discouraging teachers from experimenting with new teaching methods. However, the results in table 5.15 suggest that positive consequences of school inspection standards were higher rated than negative consequences by participants.

5.4.1.8 Rewards/Sanctions

Table 5.16: Participants' Views on Reward/Sanctions

Rewards/Sanctions	Percentage of Strongly Agree/Agree	M	SD	t	df	p
*+28.1 If the school where you were working in were rewarded by Inspectorate, you would be more likely to be encouraged to work hard.	75.7%	3.97	.804	93.433	357	.000
28.2 If the school where you were working in got sanctions from Inspectorate, you would be more likely to actively focus on resolving problems that Inspectorate pointed out.	72.07%	3.89	.851	86.428	357	.000

Note: n=358; *+: significantly higher rated than item 28.2.

The result of the paired samples t-test shows that means of item 28.1 and 28.2 differed significantly. This suggests that rewards (28.1) were higher rated than sanctions (28.2) to motivate teachers to work hard. In alignment with this result, England's Ofsted also endorsed the strengths of incentives for schools that are judged as "outstanding" in reaching the inspection standards since this could allow schools to demand benefits or special status (Ehren et al., 2013). Accordingly, teachers are motivated to work hard when schools get benefits from satisfactory school inspection performance because teachers might also get some benefits, such as a sense of honour and material rewards brought by increased school status. However, the literature suggests this is heavily depending on schools' performance. For those continuously low performing schools, formal sanction tends to be more effective to improve school performance (Diamond & Spillane, 2004; Ehren et al., 2013).

5.4.2 Are there any differences in the views of participants with Junior/Senior professional titles from the urban area and rural area?

5.4.2.1 The Main Effects of Rural/Urban and Junior/Senior Status on Participants' Perceptions

A two-way ANOVA was performed in order to examine if J/S professional titles and urban or rural area affect perceptions of participants.

- Procedure/Approach

Table 5.17: Significant Result of Two-way ANOVA in R/U and J/S in Approach/Procedure

Approach/Procedure	Mean				F		
	R	U	J	S	R/U	J/S	IE
21.4 Use of externally set performance indicators	3.93	4.18	4.23	4.03	**4.003 (.046)**	**5.580 (.019)**	1.644 (.201)
21.7 Class observation by external inspectors	4.07	.391	4.19	3.92	1.122 (.290)	**7.375 (.007)**	.769 (.381)
21.8 Written Feedback provided by external inspectors	3.94	4.04	4.17	3.96	1.091 (.297)	**4.911 (.027)**	.536 (.465)
21.9 Verbal Feedback provided by external inspectors	3.98	4.04	4.17	3.93	.121 (.728)	**5.540 (.019)**	.128 (.721)
21.10 How frequently that the schools are visited each term	3.81	3.96	4.14	3.77	.657 (.418)	**11.676 (.001)**	1.363 (.244)
21.11 School self-evaluation report	3.91	4.09	4.24	3.91	1.061 (.304)	**11.436 (.001)**	2.044 (.154)

Note: R=Rural, U=Urban, J=Junior, S=Senior, IE=Interaction Effect. p-values in parentheses. Differences with p<.05 highlighted in bold.

The results of the two-way ANOVA show that there were significant main effects of junior/senior professional titles and of the urban/rural area on participants' perceptions on item 21.4 ($p<0.05$) regarding the importance of externally set performance indicators, but no significant interaction effect. Participants with a junior professional title tended to attach more importance to externally set performance indicators than participants with a senior professional title, as did participants from the urban area compared to those from the rural area. Based on the above result of the two-way ANOVA, there was a significant main effect of the junior/senior professional title in participant perception of all five items including use of externally set performance indicator (21.4), class observation (21.7), written feedback (21.8), verbal feedback (21.9), frequency of school inspection (21.10), and school self-evaluation (21.11) regarding inspection approach/procedure (see Table 5.17).

- Consequence of School Inspection

Table 5.18: Significant Result of Two-way ANOVA for Items on the Consequences of School Inspection

Consequence	Mean				F		
	R	U	J	S	R/U	J/S	IE
Performance Indicators and Targets							
22.1 Current performance indicators are appropriate for evaluating the quality of education	3.81	3.88	4.00	3.77	.137 (.711)	**6.022 (.015)**	1.062 (.303)
22.2 Setting targets leads to school improvement	3.78	3.98	4.05	3.83	2.068 (.151)	**5.635 (.018)**	1.154 (.283)
22.4 Target setting is not an important issue for schools	3.91	3.45	3.72	3.53	**15.786 (.000)**	3.733 (.054)	.570 (.451)
22.5 A focus on quantifiable targets distorts the purposes of education	4.13	3.88	4.07	3.89	**6.316 (.012)**	3.385 (.067)	.276 (.600)
External School Inspection							
23.1 School Inspection is necessary to monitor the range and extent of education quality	3.80	3.89	4.00	3.78	.483 (.487)	**4.019 (.046)**	.148 (.701)
23.2 School inspection improves the quality of classroom teaching	3.75	3.83	3.95	3.73	.232 (.630)	**4.058 (.045)**	.268 (.605)
23.5 School inspection requires teachers and headteachers to spend too much time in preparation for school visit and is distracted from teaching and learning.	3.76	3.39	3.54	3.49	**7.159 (.008)**	.110 (.740)	.030 (.862)
School Internal Self-evaluation							
24.1 In general, internal self-evaluation is beneficial for improving teaching	3.74	3.97	4.05	3.81	2.806 (.095)	**6.932 (.009)**	1.970 (.161)
24.2 There is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school.	3.71	3.19	3.26	3.41	**19.702 (.000)**	.435 (.510)	1.385 (.240)

24.4 Internal self-evaluation is beneficial for improving students experience	3.80	3.95	4.07	3.81	1.493 (.223)	**7.210 (.008)**	.409 (.523)
24.5 Internal self-evaluation is beneficial for improving students' academic outcomes	3.80	3.87	4.02	3.75	.177 (.674)	**7.476 (.007)**	.593 (.442)
24.6 Internal self-evaluation is beneficial for improving overall performance of school	3.77	3.90	3.99	3.78	1.162 (.282)	**4.030 (.045)**	.037 (.848)
Well-being							
26.2 I feel pressure for my school overall to do well on the inspection standards	3.85	3.53	3.64	3.62	**6.319 (.012)**	.062 (.803)	1.195 (.275)
Feedback							
25.3 The Inspectorate identified additional weaknesses that the school had not identified	3.74	3.83	3.93	3.73	.227 (.634)	**5.616 (.018)**	1.148 (.285)
25.5 Inspections generated useful feedback for me to improve my teaching practice.	3.75	3.83	4.00	3.73	.598 (.440)	**7.625 (.006)**	.598 (.440)

Note: R=Rural, U=Urban, J=Junior, S=Senior, IE=Interaction Effect. p-values in parentheses. Differences with p<.05 highlighted in bold.

Based on the results in Table 5.18, there was a significant main effect of the urban/rural area on participants' perceptions of item 22.4, 22.5, 23.5, 24.2 and 26.2 regarding target setting, external school inspection, school self-evaluation, and well-being. Participants from the rural area tend to give higher ratings to the five items above regarding consequences of school inspection in relation with inspection quality. Also, there was a significant main effect ($p<0.05$) of the junior/senior professional title on participants' perceptions of 10 statements regarding consequences of school inspection.

First, with regards to the main effects of R/U areas on participants' perceptions, participants from the rural areas generally rated the importance of school inspection procedures to demonstrate and improve education quality lower than participants from the urban areas. More specifically, "the external performance indicator" (21.4), was rated significantly lower by participants from rural schools than participants from urban schools. As claimed by the interviewees, the weak operability of some inspector indicators makes it difficult for rural schools to reach the required inspection standards, which compels schools to fabricate self-evaluation reports. However, these reports cannot reflect the real circumstances of education quality in the rural school, but negatively influence the quality of school inspection in rural schools and further broaden the gap in education quality between the urban and rural schools. This explains why the statement "there is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school" (24.2) was rated higher by participants from rural areas than urban areas. Furthermore, rural participants appear to believe that setting targets is not an important issue (22.4) and focusing on quantifiable targets "distorts the purposes of education" (22.5). Additionally, participants from the rural area also tended to spend more time preparing for school visits, which distracted them from teaching and learning (23.5) and feel more pressure for their school overall to do well in school inspection (26.2) when compared with participants from the

urban area. This could be due to the gap in distribution of educational resources and a difference in school quality between urban and rural schools, which will be discussed further in Chapter 7.

Secondly, regarding the main effect of Junior/Senior professional titles on participants' perceptions, junior teachers rated the importance of school inspection procedures, such as self-evaluation (21.11), externally-set performance indicators (21.4), written (21.8) and oral (21.9) feedback from external inspectors, observation of classroom teaching (21.7) and how frequently the school was visited (21.10) higher than senior teachers for demonstrating and improving education quality. More specifically, junior teachers tended to be more supportive of the following statements than senior teachers: current performance indicators were appropriate for evaluating the quality of education (22.1), and setting targets promote school improvement (22.2); external school inspection was necessary to monitor the range and extent of education quality (23.1) and improved the quality of classroom teaching (23.2); feedback from the external inspector were useful to identify additional weaknesses (25.3) and improve teaching practice (25.5); and internal self-evaluation is beneficial for improving teaching (24.1), student experience (24.4), student academic outcomes (24.5), and overall performance of school (24.6). These results might be attributed to the different expectations for career development between junior and senior teachers, which will be discussed further in Chapter 7.

5.4.2.2 The Main Effects of the School on Participants' Perceptions

To examine if there were differences in participant perspective of from 10 schools in terms of school inspection approach/procedure and the consequences yielded from school inspection process in improving educational quality, a one-way ANOVA was performed.

- Procedures of School Inspection

Table 5.19: Significant Result of One-way ANOVA for 10 Schools in Approach/Procedure

Approach/Procedure	F	df	P
*⁻21.4 Use of externally set performance indicators	2.584	9, 348	.007
*⁺21.7 Class observation by external inspectors	2.719	9, 348	.004
*⁺21.8 Written Feedback provided by external inspectors	2.483	9, 348	.009
*⁺21.9 Verbal Feedback provided by external inspectors	2.669	9, 348	.005
*⁻21.11 School self-evaluation report	2.895	9, 348	.003
*⁺21.12 Rewards and sanctions received from the inspectors	2.317	9, 348	.015

Note: *⁻= the items were significantly lower rated by participants from school 9, *⁺= items were significantly higher rated by participants from school 9.

The result of one-way ANOVA showed that there was a significant effect of schools on participants' perceptions of school inspection approach/procedure. The results of Bonferroni post hoc tests show that three items related to use of external performance indicators (21.4) and the school self-evaluation report (21.11) were rated significantly lower and four items regarding class observation (21.7), written feedback (21.8), verbal feedback (21.9), and rewards/sanctions (21.12) were rated significantly higher by school 9 than the rest of schools (see table 5.19).

- Consequence of School Inspection

Table 5.20: Significant Result of One-way ANOVA for 10 Schools in Consequence

Consequence	F	df	P
Performance Indicators and Targets			
*+22.2 Targets lead to school improvement	2.519	9, 348	.008
*-22.4 Target setting is not an important issue for schools	3.404	9, 348	.001
External School Inspection			
*+23.2 School inspection improves the quality of classroom teaching	2.987	9, 348	.002
*+23.3 School inspection results in this schools fabricating documents used for school inspection in order to reach inspection standards	3.404	9, 348	.002
*+23.4 During inspection visits, teachers in your school are prepared and better structure their lectures to reach process standards.	2.228	9, 348	.020
School Internal Self-evaluation			
*+24.2 There is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school.	5.971	9, 348	.000
*-24.4 Internal self-evaluation is beneficial for improving students experience	3.961	9, 348	.000
*-24.5Internal self-evaluation is beneficial for improving students' academic outcomes	3.953	9, 348	.000
*-24.6 Internal self-evaluation is beneficial for improving overall performance of school	3.981	9, 348	.000
Feedback			
*+25.1 The feedback provided to the teacher during the last inspection visit was insightful to improve classroom teaching	2.655	9, 348	.005
*+25.2 The inspectorate identified additional strengths that the school had not identified	4.188	9, 348	.000
*+25.3 The Inspectorate identified additional weaknesses that the school had not identified	2.748	9, 348	.004
*+25.4 The school in the main will act on the feedback received from the inspectors	3.935	9, 348	.000
*+25.5 Inspections generated useful feedback for me to improve my teaching practice.	4.672	9, 348	.000
Well-being			
*+26.1 I feel pressure to improve my teaching as a result of the last inspection visit	2.724	9, 348	.004
*+26.2 I feel pressure for my school overall to do well on the inspection standards	3.262	9, 348	.001
Inspection Standards			
*+27.3 Teachers in my school are discouraged from experimenting with new teaching methods that do not fit the scoring rubric of the Inspectorate.	2.824	9, 348	.003

Note: *-= the items were significantly lower rated by participants from school 9, *+= items were significantly higher rated by participants from school 9.

The result of one-way ANOVA showed that there was a significant effect of schools on participants' perceptions of 17 items in terms of performance indicators and targets, external school inspection, school self-evaluation, feedback from inspectors, participants' well-being, and school inspection standards. Bonferroni post hoc tests showed that the only systematic pattern in the pairwise tests is related to School 9. Among these 17 items only four items

were rated lower by school 9 than other schools, and the rest of 13 items were significantly higher rated by school 9 than the rest of schools.

First, the statement that "setting targets leads to school improvement" was higher rated by school 9 than other schools. Consistently, the statement that "target setting is not an important issue for schools" was much lower rated by school 9 than other schools. This suggests that target setting played an essential role in promoting the improvement of school 9 (see section 6.3.1.1). Second, school 9 rated the impact of school inspection higher than other schools on improving the quality of classroom teaching (23.2) and classroom teaching practice (25.1 and 25.5), identifying additional strengths (25.2) and disadvantages (25.3), and promoting schools to act on the feedback received from the inspectors (25.4). This is consistent with the result that participants from school 9 paid more attention to the influences of written feedback (21.8) or verbal feedback (21.9) from inspectors through classroom teaching observation (21.7) on improving classroom teaching quality and students' academic achievements than the other schools. The interviewee from school 9 also approved the advantage of the feedback provided by the external inspectors in strengthening management of the classroom to improve students' learning habits (see section 6.3.1.2 in Chapter 6).

However, participants from school 9 rated the statements higher than other schools regarding the negative consequences in fabricating documents used for school inspection (23.3), preparing, and better structuring lectures (23.4) in order to reach inspection standards. According to the interviewees, this may result from the less reasonable and practical external performance indicator applied to evaluating students' outcomes, which went beyond the capability of school 9 to reach. Consequently, the interviewee from school 9 admitted that in order to satisfy the standards of school inspection, teachers fabricated documents, such as school self-evaluation report to reach the inspection standards. In this case, participants from school 9 gave lower ratings to the importance of performance indicators (21.4) and self-evaluation reports (21.11) to demonstrate education quality. This also explains why the statements regarding properly implementation of school self-evaluation based on the published criteria (24.7) and the positive impact of the school self-evaluation on improving students' learning experience (24.4), academic achievement (24.5), and overall school performance (24.6) were rated lower by participants from school 9 than other schools; and the statement that "there is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school" (24.2) was rated higher by participants from school 9 than other schools.

Third, overloaded work of preparation for school inspection aggravated teachers' burden and exerted more pressure on teachers from school 9 than other schools. Hence, participants from school 9 rated the statements regarding their pressure to improve their teaching (26.1) and for their school overall to do well on the inspection standards (26.2) higher than participants from other schools. This is in line with the interviewee's comments that teachers in school 9 felt anxious to prepare for school inspection (see section 6.3.2.4). Accordingly, teachers from school 9 who usually suffered in the stress of preparing for school inspection might be more likely than teachers from other schools to be discouraged from experimenting with new teaching methods that do not fit the scoring rubric of the inspectorates (27.3). Finally, due to students' poor performance in the entrance examination for senior high school, teachers' enthusiasm for working had gradually faded. Therefore, participants mentioned that it would be useful to motivate teachers' performance initiative through rewards (21.12) (see section 6.3.1.3 and 6.5.2).

5.5 Chapter Conclusion

To address RQ1, participants' perceptions of the importance of school inspection purpose were examined. As a result, complying with legal regulations (83.24%) and promoting school development (82.4%) are the most supported inspection purposes which are in line with the official stated purpose of inspection in Chinese policy documents. On the contrary, the least endorsed purpose is to promote teacher/school accountability (74.03%), which may reflect the fact of the weak external accountability in China, due to the lack of significant consequences of school inspection. More specifically, the inspectorates of education possess no power to reward or punish schools in China (see Chapter 6). Additionally, neither national nor provincial policy documents mentioned accountability as the purpose of school inspection (MOE, 2011a). Participants from the rural areas gave higher ratings to "compliance with legal regulations" and "promoting educational equity" as a purpose of inspection than the urban participants did. The limited time and geographical inconvenience for school inspection might affect the school inspection processes in the rural schools where a simple check of compliance with legal regulations was performed instead of a meaningful examination of school management and classroom instruction (De Grauwe, 2001; Jaffer, 2010; Santiago et al., 2012). Due to the imbalanced development of education across the urban and rural areas, more concerns with equity were generated in rural schools, which will be further illustrated in the following chapter.

In response to RQ2, teachers/stakeholders' views about the importance of different inspection indicators show that indicators related to students' well-being, were emphasised by more than 90% of participants, covering aspects such as students' safety, living condition, non-violence environment, and mental health. As indicators from school inspection framework of Shandong province, these are also seen as important factors in addition to academic attainment influencing school effectiveness (OECD, 2011; Ofsted, 2016; ORA, 2014). The indicators in relation to teaching and learning regarding students' participation in interactive classroom teaching (19.12); that is helpful to develop students' independent thinking skill (19.17 and 19.36); and teachers' morality (19.20 and 19.21); and in terms of treating every student equally (19.15) were rated the most important for demonstrating education quality. Considering that students' academic outcomes are still the dominant criteria for evaluation of education quality in China, senior teachers who doubt about the effects of educational innovation expressed less positive attitudes towards the importance of indicators related to school formal evaluation (18.12) and using dynamic individual records to record each student's overall progress (18.13) to demonstrate education quality than junior teachers. In addition, junior teachers could be more supportive of indicators regarding teachers' professional development when it was driven by career promotion.

Interesting among the 10 schools, only participants from school 9 appeared to respond somewhat differently from teachers in other schools. This may be because school 9 is a highly disadvantaged urban school with a high intake of migrant children. Teachers in School 9 attached more importance to indicators related to accepting children of rural migrant workers to receive compulsory education in cities (17.1) in relation to compliance with legal regulations and indicators regarding teachers' morality (19.20), paper publication (19.22), the roles of model teachers (19.28) and model classes (19.29) in promoting teachers' professional abilities in comparison with the responses from the remaining schools. This might be because most students in school 9 were from migrant-worker families where children receive less concern from parents and achieve poorer academic performance when compared with urban peers in other schools. Thus, according to the interviewees from school 9, teachers tended to pay more efforts on strengthening teachers' professional development in order to improve school performance which is weakened by the intakes of disadvantaged students (see Chapter 6).

In response to RQ3, the most important procedural aspect of school inspection to demonstrate and promote education quality is the "publication of school performance data" (79.61%). In light of the inspection procedure/approach, the external performance indicator (21.4) to

demonstrate and improve education quality was significantly lower when rated by participant from the rural area and participants from school 9. Regarding the consequences of school inspection, a focus on quantifiable targets which distorts the purpose of education (22.5) was the highest rated (69.27%) among statements related to school targets. Moreover, although 65.92% of participants who responded to the survey questions agreed that current performance indicators were appropriate for evaluating education quality, as a result, more than half of the participants admitted that schools fabricated documents for school inspection to reach the required standards. These results indirectly suggest that some performance indicators might go beyond the capacity of school. Finally, more than half of participants confirmed that external school inspection to some extent increased participants' workload and pressure. The positive consequences yielded from the process of school inspection are reflected in the feedback from the external inspectors and the rewards. More than 60% of participants recognised positive roles of inspection feedback in improving their teaching practice, classroom teaching quality and identifying strengths and weaknesses of school management, Furthermore, the rewards in terms of motivating school staff to work hard on addressing the issues identified by inspectors was higher rated by participants than sanctions.

This chapter addressed RQ1-RQ3 through examining participants' perceptions of school inspection purposes, the importance of inspection indicators and procedures/approaches to demonstrate and improve education quality. The statistical results used to address RQ1 and RQ3 will be triangulated with the qualitative analysis results based on the interviews. The qualitative evidence employed to address RQ6 in relation to the policy context of education and the school inspection system that influences education quality was also quoted to explain the significant (or non-significant) quantitative results or surprising results. The following chapter will introduce the findings of qualitative data analysis performed based on the interview data.

Chapter 6 School Stakeholders' views about School Inspection: Findings from the Interviews

6.1 Introduction

This chapter presents the qualitative findings from interviews with national and local inspectors, headteachers and teachers in three schools and open text survey items concerning the nature and quality of school inspection systems in Q City of Shandong province and elsewhere in China. The qualitative findings are discussed to address RQs 1, 4, 5, and 6, and the evidence provided is also used to triangulate with, and contrast with, the quantitative results in relation to RQs1-3. The national and local inspectors were asked to reflect broadly on the current provincial and national policy contexts of the education and school inspection system that influence education quality. Headteachers, school managers and teachers from three junior high schools, located in urban and rural areas, were asked to reflect more on their local context and report their views on the school inspection purposes, concept of education quality, and strengths and weaknesses of school inspection processes to monitor education quality (see Appendix III for interview schedules). Based on the findings of the thematic analysis of interview data, some suggestions on improvements to school inspection implementation practice and educational quality are also proposed to inform the development of school inspection in Q City, Shandong province, and other Chinese provinces. In addition, 213 participants (58.5% of 364 participants) responded to the open-ended questions in the teacher survey (see Chapter 5) concerning the strengths and weaknesses of school inspection in practice and improvement of the school inspection system, thereby addressing research questions 4 and 5. Content/thematic analysis was also conducted on this data to complement the findings obtained from interviews.

This chapter is divided into four main sections in line with four research questions:

Research Question 1: What are stakeholder perceptions on the concept of educational quality and the purpose of school inspection? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

Research Question 4: What are stakeholder perceptions on the strengths and weaknesses of current processes of school inspection to monitor educational quality?

Research Question 5: What are stakeholder perceptions on how the inspection system could be improved?

Research Question 6: What are stakeholder perceptions on the policy context of education and the school inspection system that influence education quality?

Similarities and differences in the views of teachers in the three schools where interviews took place will be highlighted, as well as contrasted against the views of local and national inspectors. In addition, interview evidence from the urban low performing school (school 9) participants will be specifically discussed to clarify the survey findings (Chapter 5). The findings indicate that school 9 participants have to some extent different perceptions of school inspection, from those in other schools. The basic contextual information of the three schools where staff were interviewed is illustrated in table 4.2 of Chapter 4 and shown below.

School 1 is a rural junior high school where all students are from the village and town areas in Q city. Students' outcome performance in the senior high school entrance exam was outstanding ten years ago. But recently, with the decreased number and quality of students and teachers, students' academic performance has declined compared with other rural junior high schools in the same district. The school now pays attention to students' all-round development over and above their academic exam scores by developing various optional non-academic courses. The educational vision of school 1 is emphasising autonomous education, autonomous learning, and autonomous development. Different from other rural schools, school 1 endeavours to strike a balance between students' academic learning and all-round development, rather than merely focusing on students' academic learning.

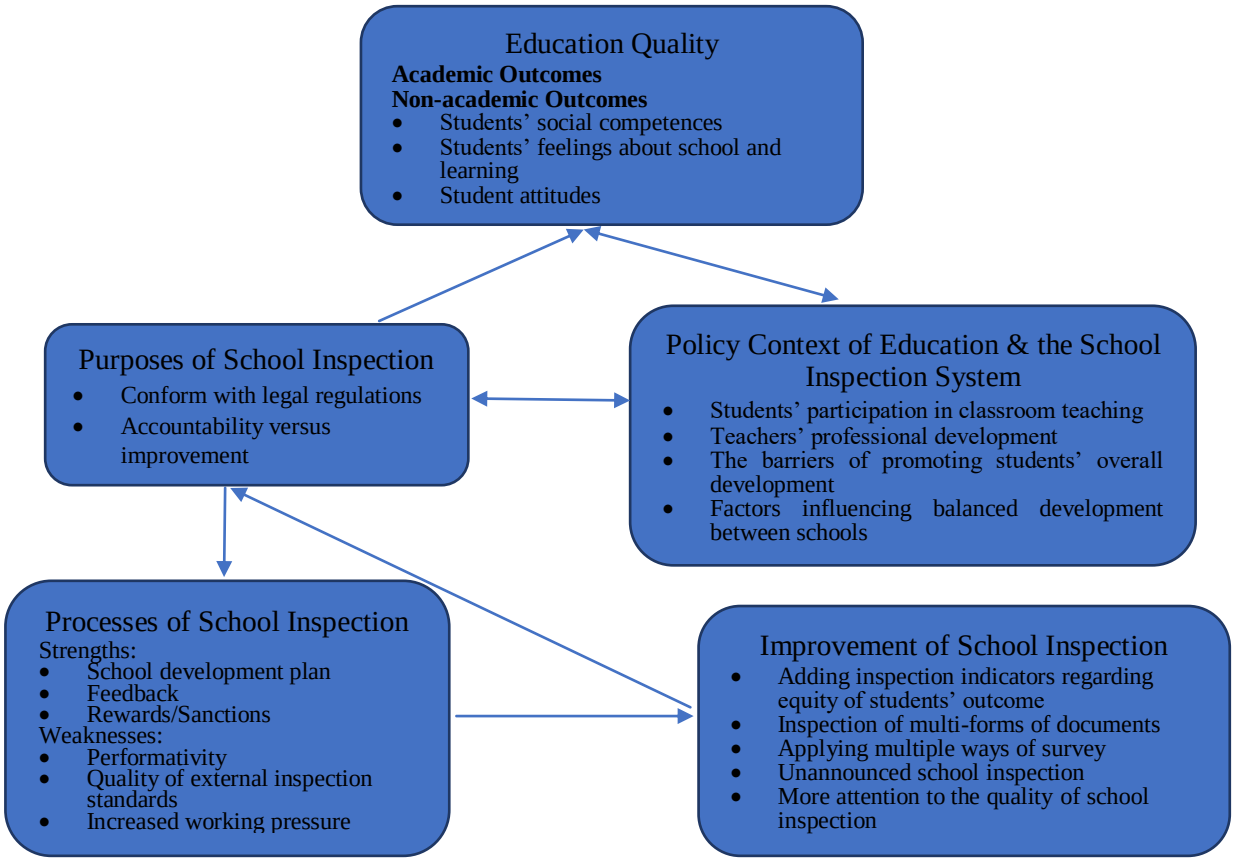
School 2 is an urban junior high school where all students are from the city and county areas in Q city, and students' outcome performance in the senior high school entrance exam is ranked amongst the highest of all junior high schools in the same district. The education concept of school 2 is also to cultivate high quality and all-round development of students with physical and mental health, national spirits and international vision. A harmonious classroom teaching model has been constructed, which aimed to promote students' all-round development in emotion, attitudes, values, characteristics, and abilities. This model promoted students' autonomous learning and cooperative learning in order to realise students' and teachers' sustainable development in the future. In school 2, most of the students are residents in the economically developed area in Q city.

School 9 is an urban junior high school in Q city where students' academic performance is among the lowest of all the schools in the same district, especially in the performance of entrance examination for senior high school. According to interviewees, almost half of the students are children of rural migrant workers. Even so, the performance of school 9 in the latest school inspection in Q city was "Excellent" according to the headteacher of school 9. School 9 is devoted to developing the school's characteristics in the aspect of traditional

moral education and Chinese culture. The concept of education in school 9 is making every student become a useful talent who can make contributions to the country.

Based on the five main themes emerging from the interview data, including education quality, purposes, procedures and improvement of school inspection, and policy context of education and the school inspection system, a framework of school inspection practice was constructed (see Figure 6.1 below). The themes "education quality" and "purpose of school inspection" were used to address RQ1 in section 6.2, since the main purpose of school inspection is to improve education quality by requiring schools to comply with legal regulations, despite the weak external accountability in the absence of mechanism for the inspectorates to execute power independently and to publish school inspection performance. This account also provides guidance for carrying on school inspections, which highlights the evidence regarding strengths and weaknesses identified in the process of school inspection, such as feedback from inspectors and performativity to address RQ4 in section 6.3. This section leads into section 6.4 by providing clues to improve the school inspection system to address RQ5. Specifically, the criteria and methods used in the process of school inspection could be improved in order to realise the purposes of school inspection in improving education quality. Also, the research findings related to the policy context of education and the school inspection system that influences education quality in schooling process address RQ6 in section 6.5. This account of the research findings could facilitate shaping the purposes and content of school inspection with a focus on student non-academic outcomes in addition to academic outcomes. This partially resonates with the conceptual framework developed in this study and the same is true, vice versa: the purposes of school inspection and education quality inform the policy context of education and school inspection system.

Figure: 6.1 School Inspection Practice within the Policy Context of Education and School Inspection



6.2 RQ1: What are stakeholder perceptions on the purpose of school inspection? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

This section presents the key themes identified in the analysis of stakeholder interview data in relation to RQ1, which highlight in particular students' social competences and feelings as critical components of education quality in addition to student academic achievement, and compliance with legal regulations, improvement, and accountability as key purposes of school inspection.

6.2.1 Concept of Education Quality

6.2.1.1 Students' Social Competences

Regarding education quality, all the interviewees emphasised that student outcomes were the most important component which contributes to education quality as noted by one county inspector since *students are the subject of educational development* (CI-Y) (see table 4.2 in

section 4.4.2 for interviewee ID codes). Interestingly, in addition to academic outcomes, student social competences that were indicated in the inspection frameworks of other four provinces are the most highlighted outcomes based on participants' comments.

> *Education quality is reflected in students' interaction and communication with other people.* (NI-S)

> *Only when students have a very harmonious relationship with classmates and teachers, would students feel happy at school. This point is very crucial for ensuring education quality* (TWO-UJ2)

> *After all, students are supposed to be involved in society, in addition to professional techniques, education quality becomes prominent in the process of getting along with other people.* (HTS-US9)

From the perspective of the interviewees, students' social competences around interaction and communication with other people were recognised as an important element of education quality because, as noted by a national inspector *one of the most important functions of school is socialisation. A one-sided emphasis on students' academic performance regardless of developing students' social skills may only set barriers for students who are selfish and short of communicative skills to survive in the society* (NI-S). The interviewees' perspectives are consistent with survey findings (see section 5.3.1.4) and previous research. Scheerens and Ehren. (2016) argued that schools should develop social competence by equipping students with skills for realising their goals, coexisting with others, and developing civic competence to contribute to society and social networks. The students' social outcomes were a shared focus of the inspection frameworks formulated by OECD and European national governments (OECD, 2013a; Van Bruggen, 2010).

6.2.1.2 Students' Feelings about School and Learning

Almost a third of the interviewees (four out of thirteen) indicated that the importance of students' feeling in relation to school and learning as a factor affecting education quality.

> *In my view, the most important aspect of education quality is to make students enjoy the happiness of success. Students' feeling should be placed in the first place of education outcome, which is more important than success itself.* (HTSH-US2)

> *We should focus on students' well-being such as students' feeling and emotion that could manifest real education quality.* (CI-S)

To examine if the school has realised the goal of education quality, we should make a judgement based on the fact that if students are fond of having classes and if they are interested in all classes at school. (TW-RS1)

I think students' interests in learning, having classes and staying at school are key to improving education quality. But the issue is that students are tired of learning, so it is difficult to stimulate student interests in learning. (TP-US9)

The interviewees' comments revealed that students' feelings were seen as a critical contributor to educational quality and were strongly linked to their well-being. This relationship is a double-edged sword: on one hand, such positive feelings could possibly generate student interests in learning which could motivate students to make progress in academic performance; on the other hand, passive feelings might oppositely affect students' learning. As reported by an education officer and a teacher from the high-performing urban school 1, *Chinese teachers have just started being concerned with students' well-being. Although the related specific measures of ensuring students' welfare had not been put forward in practice, schools have paid more attention to students' overall welfare than before* (NEO-W). *For instance, students' feedback on teachers' characteristics, the style of classroom teaching and teachers' care for students have become important criteria to evaluate teachers' quality* (TW-RS1). The evidence provided by the interviewees also supports the finding of OECD (2013a) that students' overall well-being is one of the three universal characteristics of the inspection framework of OECD countries. This qualitative finding can also be resonated with the statistical results that indicators regarding students' feeling of safety at school, students' enthusiasm for learning and students' joy for staying at school were perceived to be important/most important by more than 90% of participants (see section 5.3.1.4).

6.2.1.3 Student Attitudes

In the perspectives of other interviewees (four out of 13), the development of student characteristics and daily behaviour are also beneficial for students' sustainable development in the future.

Nowadays, educational quality is not wholly reflected in student academic outcomes, but also in student attitudes. High-performing students in academic subject learning do not necessarily possess good morality, thus, academic achievement alone cannot stand for education quality (HTM-RS1)

Actually, education quality refers to more than academic performance. Students' development of daily behaviour should be paid more attention, considering that most students from one-child families tend to be self-centred, which will affect students' characteristics and value development. (TH-RJ1)

Students' manner and politeness are also important when they interact with others. (TQ-US2)

Aside for students' social competencies and feelings about school and learning, in the view of the participants, students' attitudes and behaviour are of great importance for students' sustainable development which cannot be realised merely by enhancing student academic outcomes. One senior teacher from the underperforming urban school 9 further clarified that *students' personalities and behaviours are undoubtedly related to students' individual development. More noteworthy, students' daily behaviour will exert unintended influence on the school environment which will, in turn, influence students' attitudes/values through student peer-influence* (TB-US9). The interviewees' perspectives are consistent with the quantitative finding that item 20.8 "learners have developed right moral values and attitude" was the fourth highest rated indicator shown by participants (94.69%) to demonstrate education quality (see chapter 5). This result will be discussed further in chapter 7. Overall, the themes regarding student non-academic outcomes presented here only partially overlap with the conceptual framework of education quality.

6.2.2 Purpose of school inspection in Shandong province

6.2.2.1 Conform with Legal Regulations

More than half of the interviewees (seven out of thirteen) agreed that one of the most important school inspection purposes was supervising schools to conform to educational laws and regulations. Their perspectives suggest that schools are required to educate and teach students and run the whole school based on the national legal regulations under the supervision and guidance of the Inspectorates. An education officer compared educational inspectors to a traffic-police who *oversees traffic in order, while inspectors need to examine if the school violates any legal regulations and force schools to improve* (NEO-W). However, sometimes the leaders and teachers of schools were not aware that their seemingly reasonable behaviours went against the legal rules. So, one of the inspectors' major responsibilities is to supervise school and school teachers to correct their acts against the legal regulations and manage schools to improve, as highlighted by a city inspector.

> *When I inspected one school, I found that some teachers were lecturing students using the break time at noon which was not allowed according to educational regulations. However, the headteacher said these teachers were working hard to teach students, so we should appreciate it. However, we cannot replace the law with emotion* (CI-Y).

Teachers in China get used to working hard to improve students' academic performance, and they unconsciously fit their thinking into daily teaching routine regardless of the legal regulations. Thus, although those teachers who make use of their break time to make up lessons for students do this entirely out of their kindness and obligation, the law and regulations should not be violated. Therefore, "compliance with legal regulations" which is universally applied in six countries (the Netherlands, England, Sweden, Ireland, Austria and the Czech) (Ehren et al., 2015) is also one of the main purposes of school inspection in China according to participants. This finding is in line with the statistical result in chapter 5 that item 15.5 "to promote schools to comply with legal regulations" was the highest rated (83.24%) purpose of school inspection.

6.2.2.2 Accountability versus Improvement Purpose

With regards to the importance of accountability purpose for school inspection, a national school inspector claimed that *school inspectors are supposed to take charge of keeping each school in alignment with the roles of accountability that are essential for school inspection no matter in China or other western countries* (NI-S). Furthermore, a city inspector added that *usually, city inspectors are responsible for evaluating school quality and supervising schools to correct the misbehaviour, improve school performance, and to realise the national educational purposes on behalf of the senior provincial educational inspectorates. Accountability is actually reflected in supervision of the school* (CI-Y). Although both inspectors confirmed that accountability was essential for all schools to operate in accordance with legal regulations and national educational targets, accountability is oriented towards the internal administrative systems in schools. Moreover, according to the participants, the school inspectorates in China play fewer roles in public accountability than school development in practice.

> *School inspectorates tend to help the school develop with less emphasis on the external accountability.* (HTSH-US2)

> *I think the inspectorates are not organisations of the public accountability, but rather they are responsible for assisting school leaders in managing schools.* (HTS-US9)

> *The inspectorates attempt to look for existing issues in schools, direct, and promote schools to improve.* (TQ-US2)

> *The main role of school inspection lies in improving education quality and school performance.* (TW-RS1)

The accountability of school inspection lies in judgements and controls over evaluation which are "closely tied to either vertical relationships within an administrative hierarchy or to demands from important external constituencies on which the existence of the organisations may depend" (Scheerens et al., 2003). School inspectorates in China appear to be government bodies, and they are administered by educational departments at different levels, so participants did not recognise the roles of public accountability in the inspectorate in China. In other words, the inspectorates which implement school inspection are not external organisations to administer schools, and they do not possess real executive power to punish or reward schools (Li, 2009; Li, 2017; Sun, 2004). In view of a city inspector, *what the inspectorates only can do is to report the issues of the school to the senior educational departments at each level which could supervise or suggest schools address these issues* (CI-Y). The lack of executive power could significantly weaken the authority of the educational inspectorates.

> *The Ofsted in the UK is different from the school inspection system in China in that the Ofsted owns the independent personnel and financial administration power so that inspectorates in the UK can play the roles as the external accountability in punishing low-performing schools. However, in China, it is not likely to establish an effective supervision mechanism to monitor schools and the educational departments without executive power.* (NI-S)

> […] *in essence, school inspectorates are still depending on and administered by the Ministry of Education, which severely affects if school inspection could play its roles in supervising school quality independently.* (NEO-W)

Given the fact that the school inspectorates cannot perform executive power independently, the function of external accountability of the school inspection system in China is replaced by the stronger internal accountability. In contrast, in OECD countries, schools could be

punished or rewarded by the inspectorates based on the poor or good school performance (OECD, 2013a).

Additionally, in many western countries, publishing school inspection data is also the most commonly used accountability tool for stakeholders from different levels to supervise and monitor education quality of schools (Whitby, 2010). As noted by a national school inspector and a vice headteacher from a high-performing urban school, school inspection results in China are not publicised for the public, which differs from practices in western countries.

> *Publicising school performance could effectively increase school quality. For example, the education quality of British schools was much improved after implementing strict school inspection system by publicising and ranking all schools' performances. However, teachers and headteachers in China do not hope to publicise school inspection result, so that they do not need to face the considerable pressure of higher requirements for education quality. Hence for the sake of school development, the inspection results should be publicised.* (NI-S)

> *Compared with western countries, school inspection system in China is less effective in promoting school improvement because we cannot utilise inspection results effectively to improve education quality*. (HTSH-US2)

Nevertheless, considering the potential difficulties in implementation, two city inspectors and a headteacher from an ordinary rural school explained why publication of school inspection performance was not appropriate in China.

> *Publication of school inspection results cannot draw as much attention from parents as expected since in the long run school inspection results have not been paid enough attention. Parents are likely to place more emphasis on which school is more likely to help their children enter a reputable senior high school* (HTM-RS1).

> *The importance of school inspection has not been recognised by parents, and its impacts on students and schools are far weaker than that of entrance exam performance of the senior high school* (CI-Y).

The enrolment rates of senior high school are always the key criteria to demonstrate education quality of the junior high schools in China. Furthermore, *even if parents are aware of the importance of school inspection, it is still difficult for them to interpret the inspection result correctly. If parents lack the abilities to interpret the inspection data, this might*

damage schools' reputation, which could have negative impacts on school development (CI-S).

More importantly, parents in China are not allowed to choose a junior high school by themselves, for schools at this stage of compulsory education in China are not open to the public for free choice across different living areas (which means students can only access the schools in the school district where they are living). However, as noted by an education officer:

> *in China, the ultimate target of each family is to nurture and educate their children to be the elites. Thus, families cannot allow their children to fall behind others. Once the inspection performance result is publicised, parents would spare no efforts to help their children enter the best school, such as purchasing school district housing, which would result in intense chaos in society.* (NEO-W)

Thus, the consequences that would be brought about by publicising school inspection results are unpredictable. Given the limited high-quality educational resources, parents who bear high expectations for their children would send their children to the best-performing schools through some personal social network to obtain extra school places, according to a national school inspector. Thus, the publication of inspection data would disturb the normal enrolment plan of school. Therefore, even though most of the participants were aware of the positive impacts on improving school quality brought by publicising school inspection results, they must be concerned with the possible risks and potential negative effects on educational equity. This issue will be discussed further in Chapter 7.

This finding is in alignment with the statistical result that item 15.7 "to promote teacher/school accountability" was significantly lower rated (74.03%, M=3.92) than item 15.2 "to promote school development" (82.4%, M=4.11) and was lower rated than item 15.1 "to improve education quality" (80.72%, M=4.03) regarding school inspection purpose (see chapter 5). The city inspector Y also added that *delegating real executive power to school inspectorates might enhance the effects of school inspection in that school inspectorates' authority could be strengthened so that schools may attach more importance to school inspection and devote more efforts to improving education quality*. Therefore, more efforts could be paid to strengthen public accountability of school inspectorates by improving the current educational administration system in China. The findings in relation to the balance between improvement and accountability purpose of school inspection will be fully discussed in Chapter 7.

6.3 RQ4: What are stakeholder perceptions on the strengths and weaknesses of current processes of school inspection to monitor educational quality?

This section presents the key themes identified in the analysis of stakeholder interview data in relation to RQ4, highlighting the strengths and weaknesses of the current school inspection process to monitor education quality in Shandong province. Additionally, participants' responses to the open-ended questions were added to enrich the interview data. Interviewees made some specific comments regarding strengths in school development plans, inspectors' feedback and rewards to improve school quality and weaknesses in performativity of group interviews and fabrication of school documents, poor quality of inspection indicators, and high frequency of school inspection in affecting school inspection quality.

6.3.1 Strengths of Current Processes of School Inspection

6.3.1.1 School Context Is Considered in School Development Plan

A school annual development plan is an essential document for inspection to demonstrate school quality and development targets. It regulates task goals and how schools realise these goals. Thus, based on school development plans, inspectors could check whether schools have completed the scheduled tasks and reached the required standards or not. A vice headteacher from a high-performing urban school and a headteacher from an ordinary rural school see it as a strength that school inspection takes into account schools plans based around the needs of the specific school context.

> […] *nowadays school development contexts and characteristics are considered in school inspection, which is more beneficial for school development than before. Considering different school contexts, it is not practical to require all the schools to reach the same targets.* (HTSH-US2)

> *Schools make the development plan depending on schools' capacity, which could reflect schools' individual characteristics. For example, urban schools are required to reach the goal that more than 50% of junior students are enrolled in the senior high schools, but for rural schools, 30% is enough.* (HTM-RS1)

The level of development of high-performing schools is initially higher than that of the low-performing schools. The targets that are appropriate to promote high-performing schools to develop further might exert too much pressure on low-performing schools since, as one city inspector mentioned that *the gap of inter-school development might not be remedied in a short period even if those low-performing schools pay much more effort to improvement* (CI-

S). The new feature of the inspection policy in Shandong province goes in line with the new inspection system applied in many European countries. The new system is advantageous to make a more localized judgment on school quality in comparison with an old-fashioned evidence-based inspection. Specifically, student outcomes are not the only criteria for evaluating education quality, but school context and process are also now considered (Altrichter & Kemethofer, 2015). A city inspector in Shandong province held similar opinions in support of context-based school inspection.

> *In my opinion, it makes sense to pay more attention to the progress that schools have achieved from the beginning to the end. If a poor school makes a significant improvement compared to its previous performance, this school should be rewarded; however, if a good school remains at the same level of performance as before, it should not be rewarded.* (CI-Y)

From this point of view, considering schools are in different stages/periods of development, *it is more important to compare the present school performance with the previous performance* (HTS-US9). Therefore, when schools decide on their development targets and direction, as long as schools realise the goals demonstrated in the school development plan, the performance of the school is seen as acceptable. This evidence supports the previous statistical results that "current performance targets are appropriate for evaluating education quality" (22.1) which was approved by 66% of participants in the survey. Also, item 21.3, targets set by the school, was significantly higher rated (78.2%) than other procedures to demonstrate and improve education quality.

6.3.1.2 Improving School Quality Based on Inspectors' Feedback

More than half of the interviewees (eight out of thirteen) recognised the benefit of inspectors' feedback in identifying the strengths and weaknesses in school management that schools cannot identify by themselves. According to city inspector, *a summative inspection with written feedback that illustrates the strengths and weaknesses of school management along with correspondent scores against each standard would be offered to schools. Finally, the recommendations for school improvement concerning the practical issues of schools would be clarified* (CI-Y). Although participants complained about the increased work burden brought by preparing for a school inspection, the positive impact of the feedback on improving school management and classroom teaching were still recognised by the headteacher from an ordinary rural school (HTM-RS1) and the vice headteacher from a high-performing urban school (HTSH-US2).

The school inspectors are real education experts whose suggestions for improvement are targeted at the shortcomings of school management in our school. Their recommendations are very persuasive. (HTM-RS1)

The feedback given by school inspectors is essential to improve schools' management. Without such an external organization, schools are likely to get lost in the process of development. (HTSH-US2)

The comments from the two headteachers indicate that the feedback provided by inspectors is regarded as positive pressure to motivate the school to make progress continuously on the right track. In line with responses to the open-ended questions in the previous survey, the respondents thought that the pressure brought from school inspection would enhance school improvement (six responses); school inspection motivated teachers to work hard (four responses), and school inspection pointed out the direction of school development (two responses). In the perspective of a city inspector, the inspector acts as a doctor to make a diagnosis concerning the aspects where the school performs well or poorly.

[…] *all schools may have their disadvantages that they are not able to identify. School inspectors should be capable of capturing the details of school management to abstract and purify what they have observed. Inspectors are also responsible for explaining the reasons for presenting these problems.* (CI-Y)

Only when schools are aware of the existing issues and the underlying influences on schooling processes could the school leaders find the right course for school improvement. A junior teacher from an ordinary rural school 1 and a junior teacher from a high-performing urban school 2 also recognised the strengths of inspector feedback in relation to improving classroom teaching.

As a young teacher, attending school inspection activities, particularly in class observation, is a good chance to know my classroom teaching quality. The problems pointed out by inspectors indeed make sense. (TH-RJ1)

Every time after the class observation was finished, we could receive a sheet of feedback concerning the weaknesses during the classroom teaching, such as the application of teaching pedagogy, teachers' interaction with students, content delivery, and so on. …Because no class will be perfect, so when inspectors help me identify these issues, I will accept them humbly. After all, they used to be good

teachers with rich teaching experience, and their feedback was very professional. (TWO-UJ2)

In addition to instructional content delivered to students and the teaching pedagogy applied in classroom teaching, students' behaviour is also observed by inspectors, according to a senior teacher from a low-performing urban school 9.

The feedback of school inspection indeed promotes classroom teaching. Last time inspectors' feedback suggested that it was very noisy in the classroom and the management of students' behaviours should be enhanced because a good habit of keeping quiet in the classroom could make students more focused on the content delivered by the teachers, not easily distracted by other things. (TB-US9)

Teachers' comments above show that they recognised the positive effects of inspection feedback. Consistent with evidence provided by interviewees, 33 out of 213 responses in the previous survey acknowledged that in-time school inspection is powerful in offering guidance for classroom teaching and the quality of classroom teaching has been prominently improved under the supervision of the school inspectorates. This evidence regarding the strength of feedback is in accordance with the statistical results that 70.39% of the participants agreed that the school in the main will act on the feedback received from the inspectors (25.4); 66.76% of the participants agreed that the feedback provided to the teacher during the last inspection visit was insightful to improve classroom teaching (25.1); 65.36% of the participants indicated that the inspection generated useful feedback for teachers themselves to improve their teaching practice (25.5); and over 64% of the participants thought the Inspectorate identified additional weaknesses (25.3) and strengths (25.2) that the school had not recognised. However, participants' acceptance and strong motivation to act on the feedback from external inspectors also show a high sense of respecting the authority of the inspectorates, which is particularly true for junior teachers who are working in a hierarchical system (Lee et al., 2008). This finding will be discussed in detail in Chapter 7.

6.3.1.3 Rewards/Sanctions Motivate Teachers to Work Hard

Accountability is also seen as a "foreshadowing" action before authorities carry out sanctions or rewards (Scheerens et al., 2003). According to two senior teachers from a high-performing urban school, a low-performing urban school, and a city inspector, in Chinese society, rewards that could bring improved reputation to a school are always more popular than a sanction to motivate teachers to work hard.

The reward that schools have achieved would bring along a good reputation which is also beneficial for individuals' development. (TQ-US2)

Rewards are regarded as a kind of incentive for schools to make more progress. (CI-S)

Whenever teachers of our school were rewarded for their outstanding performance in teaching either by the school or by the city education department, they would be admired by other teachers. I think it is a good stimulus to stimulate teachers' enthusiasm for teaching which has gradually faded long ago with students decreased academic performance. (TB-US9)

Thus, interviewees generally considered rewards are more admirable than sanctions. Moreover, one county inspector noted, *there is no formal sanction in Chinese inspectorates. If the inspection performance of the school does not reach the required inspection standards, the inspectorates will launch a conversation with the school headteacher about the existing issues and plan of improvement. But if the school is still unable to reach the required inspection criteria, the qualifications of schools to participate in higher-level selection or competitions for the award with other schools might be cancelled* (CI-S). The sanction mentioned above appears to be much milder than those taken by some western countries, such as the Netherlands and the United States, where financial penalties would be applied to poor schools, which might directly affect a school's survival (Faubert, 2009). In the view of some headteachers, rewards in China might be more effective than sanctions to motivate schools to work hard to improve education quality. As all schools in China are seeking reputation and honour which would potentially influence school development, since, for instance, *government investment usually prefers schools with good reputations, and parents also tend to choose a reputable school for their children in the same school district* (HTM-RS1).

Additionally, the education officer claimed that *in the view of eastern philosophy rewards are more advocated than sanctions because reputation is of great importance in Chinese society. In China, the educational context is so complicated in that education quality is not only determined by the school. Educational quality is also influenced by many other factors which cannot be changed by schools alone, for instance students' habits that have been developed since their childhood. Therefore, it would be better to give rewards to schools instead of sanctions, which could encourage them to improve* (NEO-W). The evidence above supports

the previous statistical results that rewards (18.1) from inspectorate were significantly more highly rated than sanctions (18.2) to encourage teachers to work hard.

6.3.2 Weaknesses of Current Processes of School Inspection

6.3.2.1 Performativity- Rehearsed Panel-Interview

A panel-interview is a common method used in school inspection for investigating participants' opinions on some topic by bringing together related stakeholders under the guidance of inspectors. It is more challenging to facilitate a panel-interview than individual interviews in that it requires more time to be spent managing a group of people which includes teachers, students, and parents, whilst keeping the discussion on track (Wilcox, 2000). According to a city inspector, inspectors prefer to conduct a panel-interview instead of individual interviews because more reliable information can be provided through group interview due in part to the unpredictable dynamic situation. Theoretically, then, it is difficult for schools to prepare in advance. However, a city inspector indicated that it goes differently when it is put forward in practice.

> […] *At present, the panel interview does not work well. The group interview questions were used repetitively in different schools so that after one school was inspected, other schools might have known the interview questions. Thus, other schools have time to bring together all participants to prepare for these questions before the formal school inspection.* (CI-S)

This statement shows one limitation in the current school inspection system in Q city. According to the other city inspector, *we are also very helpless in that parents who participated in a panel-interview might have already been informed by schools in advance about preparing answers to the interview questions. Similarly, the information provided by teachers and students are not that reliable either* (CI-Y). In China, people's connections are strong, along with face giving and face-saving. Here, 'face' means that each member of society cares about 'the public self-image' of themselves (Faure & Ding, 2003). Additionally, there is a strongly hierarchical leadership system in China which indicates the chain of command and the person who teachers or students need to follow in keeping the order of the school (Bond, 1991). In this case, teachers are expected to assist school leaders in achieving good performance in a school inspection in order for them to get promoted in the school, and parents may cooperate with the school by providing falsified information to inspectors to help their children to draw more attention from teachers. Therefore, more reliable and practical evaluation instruments are needed to reflect the real situation of the school.

6.3.2.2 Fabrication of School Documents for School Inspection

Document inspection is often the first step of school inspection which can facilitate inspectors in formulating an initial understanding of the school in order to ascertain some potential issues and consolidate judgements from other sources of evidence (Wilcox, 2000). The headteacher from a high-performing urban school 2 confirmed that before a school inspection, provincial inspectorates would issue a policy document list by specifying the required school files for each school to prepare, with documents, such as the school self-evaluation report. According to a junior teacher from a low-performing urban school, fabricating school documents usually takes place when a school cannot meet the required inspection standards. For example:

> *We cannot finish the demanded curriculum plan, so to cope with school inspection, teachers usually prepare two versions of the curriculum schedule. One is for daily classroom teaching, and the other is for school inspections.* (TP-UJ9)

This fraudulent strategy of changing the curriculum documentation to cater for inspection standards initiated by the school teachers could negatively affect the quality of school inspection. Led by the wrong impression of a school's "good" performance, school inspectors are unlikely to recognise the exact circumstances of the schools and find problems according to current inspection standards.

Moreover, in pursuit of high performance in school inspection, schools have provided fake information by fabricating other types of school documents before school inspection, which could fail to reflect the actual situation of school quality.

> *I am responsible for preparing the documents for school inspection. In my opinion, the content of the report is different from what the school has done in practice. Actually, it did not tell the true story of school quality because the content of textual material is affected by individual attitudes which determine what to report.* (TH-RJ1)

> *It is easier to fabricate textual materials particularly when the school failed to finish the tasks required by the inspectorates.* (TB-US9)

> *Most of the time, inspection of school documents is like a pure bureaucratic exercise which was useless* (TW-RS1).

Likewise, school self-evaluation is also facing the challenge of credibility that is directly related to the quality of external school inspection (Wilcox, 2000). Schools intend to only reflect the positive aspects of the schooling process in the school's self-evaluation report since the scores of self-evaluation are counted in the final scoring of school inspection. As reported by a senior teacher from a low-performing urban school:

> *...we fill in the self-evaluation form according to the requirements. If our school is planning to attend some awarding activities, the self-evaluation scores should be no less than 100 points. Thus, schools need to fabricate some materials to reach the required scores to compete for the award even if the school did not carry on this work.* (TB-US9)

As school self-evaluation is conducted by those people who understand best what occurs in the schooling process, so data should be handled in a meticulous, fair, and practical way since the generated information is immediately exposed to those who are expected to act on it and accommodate improvement planning (MacBeath & McGlynn, 2002). The schools' strategic behaviour mentioned above prevents inspectors from collecting accurate data, which is likely to result in decreased inspection quality and mislead inspectors to make wrong judgments regarding school quality. Meanwhile, drawing up false self-evaluation reports to help cover the existing issues of schools cannot improve school quality in practice. School inspection should not play roles in ensuring self-evaluation to become 'self-deception' or 'self-congratulations' (Osler, 2001). Additionally, schools' performativity, as mentioned above, also demonstrates the importance of respecting the inspectorate authorities who are working within a hierarchical system (Lee et al., 2008).

The last but not the least, participants (17 out of 213) who responded to the open-ended questions in the previous survey also identified the fraudulent behaviours in the process of school inspection, though they did not point at the specific inspection method to demonstrate performativity. This evidence is in line with the previous statistical results that 56.42% of participants agreed that "school inspection resulted in schools fabricating documents used for school inspection in order to reach inspection standards."

6.3.2.3 The Quality of External Inspection Standards

- Over Specific School Inspection Standards Limit School Development

School inspection indicators are different from the targets stated in the school development plan. As a headteacher from a high-performing urban school noted, *school targets refer to the*

specific goal that schools are required to realise within a fixed period, such as *which indicators and how many indicators to reach* (HTSH-US2). Standards/indicators point at the "levels of achievement or expectation against which people and objects can be assessed" (Straughan & Wrigley, 1980, p. 12). Almost half of the participants (six out of thirteen) complained that inspection indicators regulated too many details concerning schooling processes which were difficult to reach in practice.

> *Current school inspection indicators cannot be more specific* (CI-S).

> *Whenever our school was inspected, many indicators were examined. Last time as I remember, 57 indicators were scrutinised, and there were many subordinate items to each indicator. Who can reach all these requirements? But you must finish them, no matter whether they are useful or not* (TQ-US2).

Two survey participants who responded to the open-ended questions in the survey also claimed that the inspection criteria were over-detailed. Another two survey participants gave some examples of over-detailed school inspection indicators subordinated to dimension "compliance with legal regulations" and "classroom teaching", suggesting that the over-detailed indicators may deprive of schools of their sense of autonomy in development.

A city inspector and a headteacher from a low-performing urban school 9 reported:

> *For example, students are not allowed to stay in the school for more than 6 hours. However, school is a right place for fun, since students can take part in various extra-curriculum activities in the schoolyard. Why shall we force students leaving school so early?* (CI-S)

> *Current school inspection indicators are specific and cumbersome in that there were various requirements about norms of drafting teaching plans, classroom observation, multimedia teaching technique, and so on. These requirements to some extent limit teachers' autonomy of applying diverse teaching pedagogies in different teaching contexts to accommodate students' diverse needs.* (HTS-US9)

Although the overly-detailed inspection indicators mentioned above were intended to comprehensively cover all aspects of education quality, they ignore the actual needs of schools, students, and teachers that effect the feasibility of these indicators. Moreover, over-specific indicators might discourage teachers from experimenting with innovative teaching methods to take better account of student needs in different teaching contexts for fear that the

new method might not realise the quantitative goals of students' academic achievements set by the inspectorates. As noted by a junior teacher from a low-performing urban school 9,

> *However, students' academic achievement is still playing the dominant role in evaluating school quality. So, to strive for the further development of schools, increasing the enrolment rate of the senior high school is vital, which also limits teachers' mind of innovating teaching pedagogy and updating their educational visions.* (TP-UJ9)

In lower performing schools, such as school 9, teachers may feel pressurised to devote most of their time to improving students' academic achievement. Thus, the time available to be spent in enhancing teachers' professional development and developing students' versatile abilities may be reduced. In this case, school inspection was likely to exert positive pressure on teachers to improve their teaching practice through monitoring and supervision in line with the statistical result that more than 70% of participants agreed that school inspection standards improved evaluation and supervision of teachers. However, reaching the previously-set indicators is not seen by interviewees as the primary purpose of school inspection; instead, inspection is focused on promoting schools to reach an achievable and practical inspection standard in order to achieve the desired education quality. Accordingly, the weakness in school inspection indicators are also supported by the statistical result that more than 40% of participants agreed that "school inspection standards had resulted in narrowing curriculum and instruction strategies (27.4)" and "teachers in your schools were discouraged from experimenting with new teaching methods that were not fitting in the scoring rubric of the inspectorate" (27.3).

- Inadequate Research on School Context Before Formulating Inspection Standards

Interviewee comments also suggested that before formulating school inspection standards, systematic investigation and research are essential to better accommodate the needs of stakeholders, including students, teachers, and parents.

A junior teacher from a low-performing urban school (US9) doubted the operability of some indicators subordinated to dimension "compliance with legal regulations" in evaluating school quality since those indicators exceeded the school's achievement capacity.

> *We cannot finish the required curriculum hours within one academic term as required by the inspectorates. Considering there are more disadvantaged students in our school compared to other schools, extra class hours are needed to finish the*

required curriculum plan. However, running additional classes is not allowed by the inspectorates, either. (TP-UJ9)

The comments above suggest that the inspectorates did not consider the circumstances of a low-performing school when they formulated inspection indicators that went beyond school's achievement capacities. In some cases, unpractical indicators required teachers to suffer in an awkward situation where obeying one indicator means breaking the other. Consequently, teachers' work burden and pressure are aggravated by spending more time in preparing documents for school inspections in order to cater to inspectors' preferences (see section 6.3.2.4). At the same time, both inspector and teacher participants also doubted the reliability of data collected that would be used to formulate inspection criteria. As a city inspector noted:

[…] *although I have participated in formulating school inspection criteria many times, some of the standards violate the rules of education, which weakened the operability of the indicators. Some of the indicators are drawn based on the findings of school-based research concerning classroom teaching quality, but usually, the inspectorates required schools to finish the research within half a year, which is far from being enough for teachers to obtain the verified findings to inform school inspection standards.* (CI-Y)

Also, a senior teacher from a lower performing urban school (US9) noted:

I think people who drafted the criteria do not know school practice at all due to the ineffective investigation of schools, considering that what school inspectors can see in the schoolyard is always the best performance that schools could show. (TB-US9)

From participants' complaints regarding inadequate research before formulating school inspection framework, it can be found that in addition to top-down initiatives, bottom-up strategies are essential in response to different priorities generated by diverse, local, social and economic needs (OECD, 2013a). Thus, key stakeholders who are more familiar with schooling practice should be engaged in evidence-informed policymaking, which may enhance school capacity and effectiveness in implementing inspection criteria (Ehren et al., 2017).

- Quality of Inspection Judgements

The unpractical indicators that result from the lack of adequate investigation with key stakeholders from local schools also impact the quality of school inspection judgements, as noted by a city inspector and a headteacher from an ordinary rural school (RS1):

> *…it is tricky for us to make a reasonable and reliable judgment on school quality because the operability of criteria is weak; and more importantly, we cannot finish data collection and analysis within such a short period. Almost half of the time is spent on documents inspection and observing classroom teaching. For example, is it possible for you to make a reliable judgement on teachers' quality within half a day?* (CI-Y)

> *In my view, during the period of school inspection, inspectors might use a lower standard than used in urban schools to evaluate our school. Perhaps, they know that the standards are too high for us to reach. So even if we cannot reach it, they also let us pass the inspection* (HTM-RS1).

In the process of inspecting schools based on the ready-made indicators, the trustworthiness of inspectors' judgment can always be regarded as a problem for any inspection body since an inspection's inherent qualitative nature cannot accommodate validity and reliability (Wilcox, 2000). In addition to the qualitative nature of the inspection, school inspection effectiveness is also weakened by some of the unpractical indicators and the limited time for data collection according to participants in Q city. Within the limited time scope, inspectors might be likely to overlook schools' real problems and needs. The inspection results could, in turn, affect the credibility of the standards or policies issued by the inspectorates. Therefore, the interview findings suggest that more scientific and rigorous fieldwork and research should be conducted before formulating and implementing school inspection standards. Following the comments above, participants (11 out of 213) who responded to the open-ended questions in the survey also recognised that *data collected for school inspection could not adequately reflect the real situation of the school*.

6.3.2.4 Participants' Working Pressure Brought by Frequent School Inspection

Participants from both the urban and rural school recognised the weakness of frequent school inspections in relation to the increases on teachers' workload and pressure.

> *The frequency of school inspection is not reasonable since whenever our school was inspected, the teachers would be busy with dealing with school inspection, which could mess up my work schedule.* (TQ-US2)

> *Our school is inspected three to four times per year, which is too frequent for teachers to tackle. We feel so anxious to prepare for each school inspection, and our working schedule was disturbed.* (HTS-US9)

> *Sometimes we need to prepare some documents for school inspection, but school is supposed to put teaching and education in the first place. School inspection still disturbs regular teaching order of school.* (TH-RJ1)

All interviewees agreed that frequent school inspection disrupted the normal teaching order and was responsible for increasing teachers' workloads and pressure, which was recognised by 12 out of 213 participants who responded to the open-ended questions in the previous survey. But compared to the urban schools, rural schools seem to be visited less frequently.

> *I think the frequency of school inspection is reasonable, due to the geographical priority that inspectors might feel more convenient to visit urban schools than rural schools. Usually, the rural schools are randomly selected to attend school inspection, so that not every rural school is inspected each time* (TW-RS1).

However, the less frequency of school visits did not release rural schools' burden according to the headteacher at the same school. They still need to spend a great deal of time in preparation for school visits.

> *The frequency that our school was not unacceptable. One of the significant issues is that our school has a lack of teachers. So, we must recruit provisional and substitute teachers from society. In such a difficult situation, teachers who need to prepare for school inspection will affect their work of teaching.* (HTM-RS1)

Therefore, teachers in the rural school could also be distracted from teaching when they prepare for school inspection due to the insufficient number of teachers in the rural schools (see section 6.5.4.1). The participants (213 in total) who responded to the open-ended questions also acknowledged that teachers' workload was strengthened (thirteen responses), teachers need to spend extra time in preparing for school inspection (nine responses), and teachers' pressure is enhanced by school inspection (two responses).

The evidence provided by the interviewees supports the previous statistical results for item 26.4 "when my school is inspected every term, my workload is increased to prepare for inspection" (65.64%) and item 26.3 "when my school is inspected every term, I feel additional pressure" (63.13%), which were the highest rated weaknesses for the school inspection process to monitor education quality. 53.91% of participants agreed with item 23.5 that school inspection required teachers and headteachers to spend too much time in preparation for a school visit and made them distracted from teaching and learning.

6.4 RQ5: What are stakeholder perceptions on how the inspection system could be improved?

This section highlights the key themes emerging from the analysis of stakeholder interview data in relation to RQ5, which place an emphasis on improvement of school inspection system. Also, participants' responses to the open-ended questions in the survey were added to enrich the interview data. Interviewees proposed specific suggestions for improvement in terms of addressing the gap in inspection indicators regarding equity in student outcomes, inspection of multi-forms of documents, and applying multiple ways of survey and no-noticed school inspection.

6.4.1 Addressing the Gap in Inspection Indicators regarding Equity of Students' Outcome

Regarding the disadvantages of the current national inspection framework, three interviewees recognised the importance of promoting educational quality equity as it concerns students' outcomes which are regarded as a gap in school inspection criteria. As noted by a national inspector,

> *The weakest aspect of current inspection indicators system is that the indicators regarding students' outcomes are absent. In the UK specific indicators are focusing on students' academic achievements. I also suggested the national inspectorates add indicators about students' outcomes to the current inspection criteria. I think the inspectorates have not started paying attention to education quality at the student level.* (NI-S)

The national inspector mentioned the gap regarding students' outcomes inspection criteria that remains to be filled, which were also indicated by a teacher from a low-performing urban school (US9) who has been aware of the inequity in students' academic performances.

> *...currently the equity reflected in students' academic achievement is pursued by more and more people from the public. What is equity? Equity is that all the students can access a senior high school based on their academic performance. However, the differences in the performance of students are the new equity issues. So, how to close the gap in students' outcomes should be considered initially.* (HTS-US9)

Different from participants from the rural schools who were still concerned with equity in school inputs (see section 6.5.4.1), the low-performing urban school teacher, paid more attention to the gaps in students' academic achievements between schools that are affected by

the local and school context. However, the specific indicators to examine the discrepancy in students' outcomes between and within schools have not been involved in school inspection indicators system. As noted by an education officer,

> *The national educational inspectorate had made every effort to promote educational equity by increasing the educational investment in the less-developed area to narrow down the gap of educational resources across different regions. However, equity of education quality remains as a gap in educational policies, research, and reforms that have not drawn the attention of the educational inspectorates. What is the target of realising the balanced distribution of educational resources? The ultimate goal is to accomplish the balanced development of education quality. More specifically, how to narrow the inter-school gap of education quality? How to improve the academic performance of children of migrant workers? How can we fill in the big gap in students' performance in one class? Therefore, the national inspectorate needs to issue related indicators to examine students' outcomes, rather than merely paying attention to the equity of school inputs, since the object of evaluation is the individual student.* (NEO-W)

The education officer pointed out that it would be not enough for inspectorates to make an effort to address mere equity issues at the macrolevel of inputs; rather, more focuses of evaluation should be placed at the microlevel in terms of internal schooling processes, inter-school gap of education quality, and differences of outcomes between students. Since perhaps the huge number of students in the compulsory education system in China makes it difficult for the inspectorates to take individual student into consideration, more substantive evaluation of students' outcomes should be set out and strengthened by adding specific and related indicators for the levels of student, classroom, and school to the existing national inspection framework.

6.4.2 Inspection of Multi-forms of Documents

Two teachers mentioned that textual material was not a reliable document to provide genuine information about schooling practices for inspectors. Participants who responded to the open-ended questions of the survey also complained that paper materials were attached too much attention by school inspection (three responses). As an essential pathway for inspectors to obtain an initial understanding of the school, the false information might influence inspectors' subsequent judgments based on other evidence. Therefore, diversifying the form of

documents might be better than relying heavily on written materials alone to reflect the reality in school inspection.

> *Inspectors could know the school better in various ways, such as interviews and questionnaires. Even if the related school documents are inspected, the textual materials used for school inspection could be reduced. But other dynamic elements, for instance, video, and photos should be mainly examined, for these materials could offer more true information and would be more difficult to fabricate than the textual documents.* (TH-RJ1)

> [...] *for example, the inspectorates required schools to hold some cultural activities. If the inspectors check the plans for the events and we do not have enough time to organise this activity, we will fabricate the plan. But if the photo materials related to this activity are also inspected, we have to arrange this activity.* (TB-US9)

The statements above show participants' consensus on using more video and photo material instead of the textual documents to enhance the reliability of evidence used for school inspection, in the perspective of an ordinary rural school headteacher, *since fabricating these dynamic materials also aggravates the schools' workload. So, schools prefer completing the tasks assigned by the inspectorates to fabricating evidence* (HTM-RS1). More importantly, the documents with more specific and detailed evidence might be more helpful for inspectors to know what the school has done and to make a more reliable judgement on school education quality.

6.4.3 Applying Multiple Ways of Survey

In contrast to participants' perceptions of the formal group interview, the participants held more positive attitudes towards the questionnaire. Some teachers thought the questionnaire was more persuasive than interviews to provide more representative information by accessing a broader range of participants involved in the survey. As explained by a teacher and the headteacher from a low-performing school (US9), during the school visit, school stakeholders tended to tell a true story in a more relaxed environment with less external pressure.

> *Nowadays, inspectors usually survey parents by telephone, but we do not know the content of their conversation. I believe that at that moment parents were honest and would tell the truth because they do not need to confront with the social network pressure from school leaders and teachers.* (TB-US9)

Parents can access the questionnaire through an online platform using an exclusive pin number. So, parents can respond to the questionnaire anywhere without limitation of time or space, which cannot be manipulated by the school. In this case, the data offered by parents could be more reliable. (HTS-US9)

The suggestions presented above stressed that the school had an impact on the stakeholders' responses to inspectors' questions. More specifically, stakeholders would feel awkward if they point out any disadvantages of the school in front of school leaders and teachers due to the closely-connected personal relationships found in Chinese society. Therefore, participants prefer not to tell the truth in case of doing any harm to maintaining the network. However, the telephone survey and online survey might help inspectors conduct a conversation with stakeholders directly and anonymously without intervention by the school. In such a circumstance, students, parents, and teachers could avoid the schools' monitoring and influence so that they may answer the survey questions independently and objectively.

In addition, the participant also recommended that selecting participants to attend the survey randomly might generate more reliable data than employing the formal investigation. As mentioned by the headteacher from an ordinary rural school (RS1),

It is unnecessary to give schools the opportunity to prepare for interviews. Inspectors could directly choose students randomly in the schoolyard to attend the survey. For instance, did your school hold any activities related to your safety and health? [...] *or how do you like the curriculum in the school? In this way, more students could participate in the survey to provide valid information.* (HTM-RS1)

In the view of a teacher from a low-performing urban school, *the survey itself is beneficial to inspect school quality, but its forms could be slightly adjusted to inspection practice to enhance its effectiveness* (TB-US9). By examining participants' advice on improving schooling inspection procedures, it could be found that the forms of the survey can be diversified and changed to accommodate the needs of school inspection practice. An informal individual interview and questionnaire might be performed in a more convenient and natural way without bringing all stakeholders together (Wilcox, 2000).

6.4.4 No-noticed School Inspection

The inspectorate regulations state that schools are notified one month prior to a school visit in order to prepare. A city inspector (CI-S) agreed that the prior notification showed inspectors' respect for the school, indicating that suddenly descending on a school might disturb the

regular teaching order. Wilcox (2000) further explained that the disruption might prevent inspectors from seeing the school under typical conditions. However, a city inspector (CI-Y) and a national inspector (NI-S) had diverse views on the unannounced school inspection.

> *I do not advocate observing teachers' classroom teaching without prior notice. Because teachers prepare for classroom teaching carefully so they do not want to be disturbed by others. If you suddenly go into the classroom, teachers' train of thought will be interrupted, which could influence teachers' normal teaching progress.* (CI-Y)

> *Directly going into the classroom to observe teachers' class is an easy way for inspectors to recognise if teachers are fully prepared for the lesson. This action urges teachers to develop a good habit that they need to carefully prepare for lessons anytime and anywhere to get ready for inspectors' unexpected visits.* (NI-S)

The sudden class visit requires that teachers' high professional abilities to accommodate inspectors' requirements at any time. Thus, teachers need to pay more efforts in strengthening their teaching competence after class. Moreover, teachers from both urban and rural school and a city inspector thought the prior notification also made it more difficult for inspectors to recognise the real circumstances of school quality in that schools could purposefully display their "best" school performance.

> [...] *Don't inform schools in advance about the school visit schedule. Otherwise, schools would spend more time in performance rehearsal for inspectors, such as cleaning school buildings and holding students' activities. This kind of inspection is not effective but just bureaucratic behaviour.* (TB-US9)

> *If inspectors want to know the real situation of the school, they are not supposed to leave enough time for schools to falsify inspection materials. Inspectors should visit the school without prior notice.* (TH-RJ1)

> *Regular school inspection as an essential and unseparated component of schooling process is supposed to be incorporated into the daily life at school. So, schools could get used to aligning their behaviour with the legal regulations and improve school quality substantially.* (CI-Y)

Depending on participants' perceptions as shown above the effects of school inspection might be strengthened by unannounced school visits which leave no time for schools to cover or hide the existing school issues. According to responses to the open-ended questions in the

survey regarding suggestions for improving school inspection system, participants claimed that school inspectors should visit the school at any time without earlier notification, and school inspectors should observe the daily life in school rather than the performance prepared for school inspection (eight responses). Here, the developmental school inspection was proposed by participants from Q city, which requires inspectors to visit schools more frequently than before. More informal inspections conducted by small groups of inspectors might be acceptable to avoid any unnecessary disturbance for schools (Wilcox, 2000). Thus, external inspectors would be more liable to see the real situation of school quality, and school teachers do not need to spend extra time preparing for the formal school inspection, which could alleviate teachers' workload.

6.5 RQ6: What are stakeholder perceptions on the policy context of education and the school inspection system that influence education quality?

This section presents the key themes identified in the analysis of stakeholder interview data in relation to RQ5, which focus particularly on the policy context of education and school inspection system in Shandong province. Interviewees expressed their perceptions of students' participation in classroom teaching, teachers' professional development, the barriers to promoting students' all-round development, and factors influencing balanced development between schools.

6.5.1 Students' Participation in Classroom Teaching

According to a city inspector, increasing students' learning activity in the classroom through participation in group discussion, making a presentation and collaborative learning is important to improve classroom teaching quality (CI-Y). Thus, an interactive classroom teaching model with more focus on students' roles in classroom teaching has taken the place of the traditional cramming teaching method to become the most satisfactory innovative measure applied recently to classroom teaching in Q city. A city inspector and a junior teacher from a high-performing urban school saw the obvious changes concerning students' learning habits and forms of teaching delivery that were brought out by using the new model.

> *Now the questions proposed by teachers during classroom teaching are required to be insightful and inspiring to arise students' in-depth thinking and discussion.* (CI-S)

> *Under the guidance of the new teaching model, teachers' roles in classroom teaching have been changed as well. Most of the time, questions are to be addressed*

by students themselves through group discussion and cooperation. I only give some advice when it is necessary. (TWO-UJ2)

Thus, as part of curriculum reform in China, teachers' roles have been transferred from leading the classroom teaching to supporting students' autonomous learning in all schools. Meanwhile, students' ways of learning have also been changed from the passive reception of knowledge to positive learning and construction of knowledge collaboratively with teachers. A national inspector also pointed out that *reciting the content of textbook is a universal learning method applied in compulsory education in China, which generates more difficulties for students to finish a new task that has not been done by others. Independent thinking ability cannot be obtained through mechanically repeating others' ideas* (NI-S). Recitation used to be an effective way to help students master cognitive knowledge quickly in the generation when knowledge was highly praised. Nowadays, developing students' abilities of learning is found to be more important than mastering knowledge itself. Students' participation in classroom teaching is emphasised by developing their own values, beliefs, and cognitive abilities, and even further developing their own knowledge based on the prior knowledge they have learned in the classroom (UNICEF, 2000). A large body of research has revealed that students' most positive pattern of learning is reflected in activities with a focus on learning goals, e.g., students prefer challenging activities, insist on difficult work, and show a high level of task engagement and application of learning strategies to strengthen conceptual understanding (Meece & Miller, 2001). Thus, classroom teaching should also be continuously innovated to satisfy new requirements around improving students' skills of thinking to use knowledge and create knowledge. This evidence related to the policy context of classroom teaching may explain that why indicator 19.12 concerning students' participation in classroom teaching (95%) and indicator 19.17 regarding the development of students' independent thinking and practical skills (93%) were the highest rated indicators in relation to classroom teaching (see section 5.3.1.2 in Chapter 5).

6.5.2 Teachers' Professional Development

When mentioning education quality, some participants (three out of13) indicated that although education quality is mainly reflected in students' outcome, if teachers' core quality does not reach a certain standard, it is unlikely for them to cultivate outstanding students. Therefore, as part of teachers' evaluation system, strengthening teachers' capabilities for addressing issues related to students' outcome is the main target of teachers' professional

training. However, with regards to the form and content of professional development senior teachers and junior teachers showed different attitudes.

> *Nowadays, the requirements for publishing papers are lowered, since our teaching burden has already been very heavy. It takes a lot of time for teachers to finish writing a paper. As a result, the time spent in teaching students would be reduced.* (HTSH-US9)

> *Currently, the paper publication that only occupies a small proportion in teacher evaluation in comparison with before because paper publication required for teachers' excellent individual academic abilities. This requirement is different from teaching practice with an emphasis on how the teaching affects students' learning. In this sense, the quality of classroom teaching is more important than paper publication to evaluate teachers' quality.* (TW-RS1)

It can be seen from the comments above that the senior teacher pointed out that paper publication distracted them from their classroom duties and might ultimately affect students' outcome. Thus, the teacher from a rural ordinary school (RS1) argued that improving teaching quality might be more important than publishing papers in improving education quality. However, as reported by a junior teacher in the same school, paper publication would be more likely to bring about the positive influence on improving teaching practice,

> *I think paper publication and project inquiry are good for improving teaching practice for me. We could experiment a kind of pedagogy in practice of classroom teaching, such as improving student activities and the weaknesses and strengths in the process of exploration can be reflected in the paper that would be used to provide the guidance for teaching practice.* (TH-RJ1)

This junior teacher regarded involvement in the activities of paper publication and research projects as good opportunities to build up their teaching capacity, which is probably derived from their preliminary career stage. In addition to paper publication, a junior teacher from a high-performing urban school (UJ2) also mentioned collaborating with peer teachers to prepare for class in an educational group.

> *Activities of teaching research could better improve our teaching abilities. Usually, every week the teachers of the same subjects would get together to share information on teaching resources and discuss some queries that emerged in the teaching process. The headteacher also gave me lots of useful suggestions to*

> *improve teaching practice while observing my classroom teaching. After all, an individual's ability is so limited, but brainstorming could generate an unexpected inspiration to address some tricky issues.* (TWO-UJ2)

In other words, the support from headteachers and peers helps teachers overcome obstacles in teaching (Day & Gu, 2014). It is the interaction with colleagues rather than working individually strengthens teachers' professional development (Hadar & Brody, 2010). According to the junior teachers, making full use of every opportunity to improve their professional abilities is the main reason that they held a relatively more positive attitude towards professional learning. In the view of the headteacher from an ordinary rural school (RS1), *young teachers in our school are encouraged to participate in activities of professional learning in order to improve their teaching abilities within a short period, since once their teaching vision becomes fixed, it will be difficult for them to change after 7 or 8 years. Thus, they may feel high pressure when we observe their classroom teaching (HTM-RS1).*

Different from the junior teachers who paid more attention to self-development by engaging in professional development activities, senior teachers placed more emphasis on model teachers' roles in stimulating teachers to improve their professional capabilities. According to a vice headteacher and a senior teacher from a low-performing school 9,

> *Our school also invites some experts or outstanding teachers to have model classes for teachers, which is beneficial for promoting teaching. At present, everything is changing so fast, so as education. So, our vision and teaching methods should be updated in time.* (HTSH-US9)

> *Teachers who are awarded for teaching performance are often seen as models for other teachers in our school. They are happy with their work being recognised by other peers. Meanwhile, this is a stimulus for those teachers who have not been awarded to work hard. This kind of incentive is necessary for maintaining teachers' enthusiasm for work.* (TB-US9)

Based on the evidence above, the different focuses on teachers' professional development between junior and senior teachers could be attributed to their different cognition of being a teacher. On the one hand, senior teachers who have already accumulated rich teaching experience tended to believe that passing on model teachers' experience to junior teachers was an effective way for junior teachers to quickly master the essential knowledge of

teaching. On the other hand, as was mentioned by two senior teachers who were working in a low-performing school 9, and there, teachers' enthusiasm for teaching faded due to students' continuously poor academic performance. Thus, tactics of introducing the new educational vision and awarding high-performing teachers are regarded as an incentive to motivate teachers to pay more efforts to improving school capacity. This evidence supports the statistical result regarding model teachers' (19.28) and model classes' (19.29) leading roles in improving teachers' professional abilities, which received significantly higher ratings by participants from school 9 than other schools.

6.5.3 The Barriers to Promoting Students' Overall Development

6.5.3.1 Students' Learning Pressure

As to students' overall development, all participants contended that it was not easy for schools to conduct extracurricular activities in junior high school where students are facing the pressure regarding passing the entrance examination for senior high school. Following school inspection standards, junior high schools are not allowed to have extra classes for students on weekends or during holidays. However, to observe this regulation, many schools have to increase students' learning time during the weekdays.

> *Students used to have two classes for extracurricular activities in the past. Now with the increasing emphasis on students' academic achievement, schools take academic subjects instead of extracurricular activities.* (CI-S)

> *Students' learning burden is aggravated in schools which compress six-day lesson hours into five days.* (HTM-RS1)

> *Students are having too many courses including both academic subjects and optional courses so that students do not have time to attend extracurricular activities.* (CI-Y)

> *We also hope to promote students' overall development. But considering current students' academic performance in our school, we are conflicted about if we should continue to encourage students to attend various activities.* (TB-US9)

Intensively scheduled curriculum occupies students' time and disallows time for the breaks and extracurricular activities. More seriously, after having all the classes for a whole day, students have to spend extra time finishing homework. Through communicating with parents, a city inspector complained that almost every parent observes their children finishing homework until midnight every day (CI-Y). Particularly for senior students who are

attempting to enter a good senior high school, each family undergoes a stressful journey. Furthermore, examinations are made progressively more difficult year after year, which increases students' pressure in an additional way. As explained by a city inspector,

> *Nowadays, the difficulty of the textbook is increased every year. Some content of the textbook that is suitable for undergraduate students to master has been added to textbook for middle school students. Thus, middle school students have to spend more time mastering that knowledge which goes beyond their abilities.* (CI-Y)

Students' learning burden originates not only from the number of exam subjects, but also from the difficulty of learning content that prolongs students' learning time, though this often goes unseen. Students have to sacrifice more and more break time to catch up with the increasing difficulty of the textbook and also compete with other classmates. Though inspection standards regulate schools and do not allow them to call up students to have classes, parents make full use of weekends by sending their children to private tutorial classes in order to obtain higher scores in upcoming exams. As noted by a teacher from an ordinary rural school (RJ1) and a teacher from a low-performing urban school (UJ9):

> *No parent who can afford tuition fees does not ask their children to attend tutorial classes since the entrance exam of senior high school is so competitive. Parents do not allow their children to lag behind in the class.* (TH-RJ1)

> *Currently, many teachers in my school tell parents directly that you had better send your children to participate in tutorial classes after school; then it is probably more likely for them to be admitted to a senior high school.* (TP-UJ9)

From above, the competitive entrance exam system means that seeking high scores on exams is the target of education quality for each school and each family since learning in a good senior high school provides access to high-quality universities, making high school admission nearly equivalent to university admission. School and parents have to consider their students' future study plans. As a result, assisting students to achieve high scores in exams is the most practical way to realize their goals, but in addition to cognitive skills, students' overall outcomes would be sacrificed.

6.5.3.2 Dominant Exam-oriented Evaluation System

In comparison with an academic assessment that emphasises summative evaluation, non-academic outcomes require that more attention is paid to formative evaluation in the schooling process, which is a key measure applied in quality education reform to promote

comprehensive and formative evaluation of student outcomes. According to a junior teacher from a high-performing urban school 1, *students' daily behaviour, learning habits and communication with others, etc. recorded in the process may construct a whole picture of students' development* (TWO-UJ2). However, the schools rarely use students' non-academic performance to demonstrate school quality because of the complex and less tangible nature of non-academic outcomes (UNICEF, 2000). More importantly, non-academic outcomes are not as noticeable as academic outcomes for the public and educational departments to demonstrate education quality of the school. According to a city inspector and the headteacher from a low-performing urban area,

> *Evaluating students is complicated. For example, how can you measure students' morality? Moral evaluation is hard to carry on without a specific case. When the moral evaluation was initially launched, parents and students treated it seriously and responded to it based on the facts. But when they found that the performance of morality evaluation had nothing to do with improving students' performance in entrance exam of the senior high schools, this kind of self-evaluation has been gradually treated as a burden, for the result of the moral evaluation is not seen as persuasive as the academic performance test.* (CI-S)

> *Such a comprehensive evaluation is just a form without any real influence on students' development. The scores of formative evaluations will not be added to entrance exam scores of senior high schools, which cannot decide on if students can get access to the high-performing senior high school.* (HTS-US9)

Although all the interviewees were aware that academic achievement represents only one component of students' outcome at one stage, its effects on long-term development at the students' growth stage would be less important than that of other social outcomes. In the face of the pressure from the entrance exam of senior high schools, teachers still need to compromise on the facts. In the view of two headteachers and a teacher from the three schools:

> *At present, in view of the city educational department, the most important standard for evaluating students still lies in the enrolment rate for the senior high school. So, according to the perspectives of the public, the junior high school where the enrolment rate of the senior high school is high is regarded as a good school. As a headteacher of the junior high school, I am still facing the serious pressure.* (HTM-RS1)

To evaluate school quality the most acknowledged standard is always students' academic performance. (HTS-US9)

Improving education quality begins with innovating educational visions. However, considering that the enrolment rates of senior high school are still very important, substantially changing the old educational vision would be difficult. We indeed want to change it, but we can do nothing in the face of the huge pressure. (TQ-US2)

The interviewees' perspectives suggest that even if teachers and schools have recognised the importance of developing students' comprehensive outcomes, the fundamental exam-oriented evaluation system determines that students' academic performance remains as the core component of evaluation. This means that the evaluation of non-academic outcomes would only be a formality in that the documents with the records of students' non-academic outcomes are checked by the inspectors briefly, but without any substantial influence on students' admission to a senior high school. Consequently, teachers and students might attach more importance to academic examinations than non-academic evaluation. Therefore, as a result of the curriculum reform that was primarily aimed at releasing the intense academic pressure placed on students, a less exam-oriented and more comprehensive approach is supposed to be employed to evaluate students' performance (Lou, 2011). Nowadays, overloaded learning burden and the exam-oriented evaluation system is still a barrier to realise students' overall development, which will be discussed further in Chapter 7.

6.5.4 Factors Influencing Balanced Development between Schools

6.5.4.1 Distribution of Educational Resources

Participants highlighted the equity issues related to the distribution of educational resources in relation to balanced development between schools. An education officer claimed that *since 2012 the inspectorates of China had been engaged in promoting balanced school development across different regions. The inspections of schools in more than 3,000 districts and counties nationwide in terms of school inputs will be finished before 2020* (NEO-W). However, in the view of the participants, the imbalanced distribution of educational resources still restricts development of rural schools, in spite of the top rank of Q city among 19 key large cities demonstrating satisfactory education equity (Zhang & Chen, 2017).

Some schools in the urban area equipped with the best infrastructure even can be compared with the high-performing schools of the developed countries. In contrast, the buildings of many schools in the suburb and county areas in Q city are

refurbished to have a nice appearance, but with outdated teaching facilities inside that were abandoned by the urban schools. (CI-Y)

Even if a school is newly built in the less-developed area, students and teachers' quality which are influenced by the learning climate of those high-performing schools in the developed areas cannot be surpassed. Only those teachers who are highly competent in professional knowledge and teaching capabilities could be recruited by the schools to satisfy students' needs of learning. (CI-S)

I think the educational expenditures in the urban schools are enough so that they have extra money to construct school culture and climate. The funding of our school can only satisfy the basic needs to run the school and the number of teachers is not enough to ensure normal classroom teaching. It is difficult for those young and high-quality teachers to be allocated to our school. So, we need to recruit teachers from the public, which cannot guarantee the quality of the teachers. Nonetheless, without enough teachers, many courses cannot be operated normally. (HTM-RS1).

The urban schools are developing many school-based optional courses that are beneficial to enrich students' extracurricular life, but it is not necessarily feasible in rural schools. Due to the lack of funds from the local government, some rural schools could not even afford the salary to recruit the teachers. (TQ-US2).

From the comments above, the imbalanced distribution of education resources between the urban and rural areas are due not only to the number of available teaching facilities and teacher resources, but also the quality. In contrast from what was reported by the headteacher from an ordinary rural school, it has been demonstrated that urban schools have started to pay more attention to the curriculum quality and construction of a healthy school climate for improving education quality. Many rural schools instead are still concerned with how to accommodate the basic needs of schools, including teacher resources. Those high-performing schools in the developed areas attract high-quality teachers and teachers cultivated in those high-performing schools would then influence schooling processes. This case shows that a friendly and mature environment within schools provides adequate space for students' development, which cannot be managed by other low-performing and rural schools within a short term.

This is probably because currently, Q city has just arrived at a basic level of balanced development in distributing quantities of educational resources; however, there remains

improvement to be made regarding the balanced distribution of high-quality educational resources across the urban and rural areas in Q city. Up until 2015, following a five-year endeavour to narrow the gap in school inputs between schools within one region in China, only 33.59% of provinces had realised a balanced development in school infrastructure, facilities, and so on (MOE, 2015b). In this case, realising equity in education quality throughout the schooling process between different areas is likely to take longer (Zhu et al., 2017).

6.5.4.2 Students' Family Support

In addition to imbalanced development between schools in the rural and urban area, similar issues exist in one single region. In the view of a city inspector, *the most important thing that should be attached more value by the inspectorates is to ensure balanced development of schools within one region. For example, the education quality between different urban schools is also different. What is the reason of this imbalance and what kinds of strategies should be used to realise balanced development between schools? Since all the students enter each junior high school based on the neighbourhood policy, it will be unfair for those students who are allocated to a lower-performing school* (CI-Y). In this research, a junior teacher from a low-performing urban school reported that the lowest rank in students' academic performance among all junior high schools within the same district was derived from the school context.

> *Students' good performance at other high-performing schools in the more developed area can be attributed to their high-quality students in one aspect. For the other aspect, students' parents are very supportive of students' learning, which is not only restricted to academic learning, but also emphasising students' all-round development. For example, parents of the good school students would encourage their children to take part in various club activities after school. We would feel satisfied if students in our school could finish their homework on time.* (TB-US9)

Participants' perceptions suggest that the unfair competitiveness of students distinguishes students' academic achievements of school 9 from other schools. Moreover, the lack of parents' concern and support could also affect students' academic achievements. In the view of a teacher from a low-performing urban school (US9),

> *Why is students' academic performance in our school much lower than other schools? It is not because the teachers do not pay efforts on teaching, but due to the*

poorer background of the students. In each class more than half of students are from families of migrant workers whose economic status is not good enough to support their children's learning. …You can see that most students who are learning in the schools situated in the developed area make use of summer holidays to attend various tutorial classes. However, students in my school are relaxed during holiday since their families cannot afford extra tuition fees to support their children. Thus, the gap of academic performance between different areas will be further broadened. Additionally, student's individual and school's endeavours alone are not enough without the parents' support. Many students who come from migrant-worker families have to take care of themselves because their parents need to make money outside, and they do not have spare time to look after their children. (TP-UJ9)

The evidence shown above suggests that most of school 9 students with socio-economically disadvantaged backgrounds are more likely to fail in academic learning due to the lack of adequate emotional and economical support from their families in comparison with their urban peers (Lee et al., 2016; Yiu & Luo, 2017). This is in alignment with previous research which found that the combined support from teachers and parents who have similar expectations and goals for students is a powerful force for learning improvement (Jowett et al., 1991; Mortimore, 1993). This is because parents' involvement could expand students' learning time after school (Sammons, Hillman, et al., 1997). UNICEF (2000) argued that healthy children accompanied by supportive and involved parents are most likely to achieve accomplishments in school. Even so, it is more important to explore which factors in the schooling process could improve student academic achievements rather than blaming students' poor background. This issue will be discussed further in Chapter 7.

6.6 Chapter Conclusion

In response to RQ1, students' social competences, students' feelings in relation to well-being, and student attitudes were acknowledged by participants to contribute to education quality, in line with the education quality framework formulated by European countries and OECD countries (Faubert, 2009; OECD, 2013a). Typically, in line with survey findings (section 5.2.1), interviewees thought the main purpose of school inspections in Shandong province was to supervise schools to conform with legal regulations and improve school performance, and interestingly in contrast to western inspection policies, no interviewee mentioned accountability as one of the purposes of school inspection. In China, the effect of public

accountability on reinforcing schools to improve education quality is weak in that the educational inspectorates in China do not possess the executive power to punish low-performing schools directly. Moreover, participants recognised that no publication of school inspections' performance might affect effective usage of inspection results so as to weaken inspectorates' role as public accountability in promoting education quality, but at the same time, they also revealed the potential risk of damaging education equity.

To address RQ4, participants' perceptions of the strengths and weaknesses of school inspection processes to monitor education quality were examined. In the first place, the strengths of the inspectors' feedback concerning figuring out existing issues in school management and improving schooling practice were advocated by participants. The rewards awarded by the inspectorates were perceived to be more effective than sanctions to motivate teachers to work hard, for schools' honour and reputation were aspects of the rewards that are viewed as beneficial for school development in the Chinese context.

However, the weaknesses of inspection indicators recognised by the participants mean that overly specific content of school inspection standards might limit schools' autonomous development. In addition, the lack of enough investigation could weaken the feasibility and operability of inspection standards. Policymakers arguably did not collect adequate evidence from schools and did not sufficiently consider regional and school contexts, which might reduce the reliability and validity of school inspection and generate unintended consequences via strategic behaviour by school staff, such as, fabricating documents before these inspections. Furthermore, overemphasising the quantitative inspection targets on student outcomes might prevent innovative teaching pedagogies from being applied at the low-performing school where teachers preferred conservative pedagogy to new teaching approaches in order that students' academic outcomes could maintain the same level as before. Most of the participants reported that frequent school inspection might aggravate teachers' working burden and interrupt the regular working schedule.

With regard to improving school inspection, stakeholders suggested, in the school inspection indicators system, a gap in indicators regarding the equity of students' outcomes should be addressed to reduce the differences in education quality between schools and students. Additionally, an unannounced school inspection which leaves no time for schools to prepare false information in advance was approved by most participants to guarantee the reliability of evidence collected by inspectors. Furthermore, more dynamic materials, such as video and photos that are not easily fabricated were recommended to replace the textual materials.

Finally, it was suggested that multiple ways of conducting inspection surveys be applied in practice to prevent school's performativity.

In response to RQ6, participants identified five themes in relation to the policy context of education and school inspection system that affects education quality. Considering that the factors at the classroom teaching level exert direct influences on students' outcomes (Kyriakides & Creemers, 2008), participants put a great emphasis on the positive effects of the interactive classroom teaching model in improving students' independent thinking abilities that were deemed to be more important than curriculum content. Participants also listed two barriers that would hinder students' all-round development: students' learning pressure from the intensely scheduled curriculum at school and extracurricular tutoring classes; and the dominant exam-oriented evaluation system that makes other formative evaluations become a mere formality. Moreover, educational equity as the most salient issue influencing education quality (Zhou, 2017) was reflected in two aspects: first, an imbalanced distribution of educational resources is still influencing school quality between urban and rural areas; second, social-economic background of the students' families contributes to the gap in academic performance between students and between schools.

This chapter addresses RQ 1, 4, 5, and 6 based on participants' perspectives of the concept of education quality and inspection purposes, as well as the strengths and weaknesses in the process of school inspection, and their advice for improving the school inspection system in Shandong province. Additionally, evidence related to the policy context of education and the school inspection system provided by interviewees provide some clues to explain the controversial issues found among participants in the survey. In the following discussion chapter, the findings from the quantitative and qualitative analysis will be synthesised to discuss their consistency and conflicts in relation to the previous literature. In chapter 8 conclusions, the main contributions and limitations of this study, and future research will be presented.

Chapter 7 Discussion

7.1 Introduction

This chapter discusses the key research findings presented in Chapter 5 and Chapter 6 in relation to the previous theoretical framework and the latest research findings informed by international and local literature. The chapter first summarises the key research findings by triangulating the results of quantitative and qualitative data analysis, which recalls the main research account in Chapter 5 and Chapter 6. In the following sections, the interpretations of these research findings concerning the existing issues and suggestions for improvement of the current school inspection system and education quality are highlighted.

7.2 Summary of the Key Findings

7.2.1 Key Findings RQ1: What are stakeholder perceptions on the concept of educational quality and the purpose of school inspection? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

According to the interviewees, students' abilities to interact and communicate with others, feelings about school and learning in relation to emotional well-being, and students' moral attitudes are critical to contribute to education quality in addition to student academic achievements, in line with some previous research. For example, Scheerens and Ehren. (2016) have argued students' skills for realising goals, getting along with others, and developing their social network at school are the key to students' survival in society, and the role of schools includes socialisation in addition to teaching and educating students. Moreover, positive emotion could improve students' academic performance by increasing students' activity in learning. This result also aligns with the school inspection framework formulated by OECD and European countries (OECD, 2013a; Van Bruggen, 2010), which includes students social as well as academic outcomes to define education quality.

The inspection purpose survey items, "to promote schools to comply with legal regulations" (83.24%) and "to promote school development" (82.4%) were rated highest by participants. However, "to promote teacher/school accountability" (74.03%) was rated lowest. This result aligned with current practice in China according to interviewees, who claimed that school inspectors were mainly responsible for examining if schools were operating legally in practice and promoting school development by providing suggestions for school improvement. Legal and improvement purposes for inspection have similarly been identified in previous research findings that school improvement with an increasing focus on the quality

of teaching and learning has received increasing attention from the European inspectorates apart from compliance with legal regulations in relation to purpose of school inspection (De Wolf & Janssens, 2007; Scheerens & Ehren., 2016). According to the interviewees, external accountability in China is weak since at present the educational inspectorates are administered by educational departments. The inspectorates do not possess any independent executive power to reward outstanding schools, punish failing schools, and publish school inspection performance results as the inspectorates in the United Kingdom and the Netherlands where public accountability is emphasised (OECD, 2013a). The lack of effective executive power considerably weakens the authority of the inspectorates and reduces the impact of educational inspectorates on school improvement in China. School inspection performance is not available for the public in the context of China, which to some extent weakens school inspection's roles as public accountability. In the view of interviewees, this is probably because the public places more emphasis on senior high school enrolment rates rather than on inspection performance in demonstrating the quality of a junior high school. Thus, according to interviewees, if the inspection performance was published in China, it might anyway fail to exert public pressure on schools to score better on inspection indicators (Marshall et al., 2003; Meijer, 2007).

Moreover, this research revealed that participants from rural schools rated the purpose of compliance with legal regulations higher than participants from urban schools. One interviewee reported that school inspectors spent less time in rural schools than the urban schools since, in comparison with rural schools, urban schools are closer for inspectors to visit within a shorter distance. Hence, school inspectors might pay more attention to a simple check of compliance with legal regulations and administrative routines (Churches & McBride, 2013), rather than examining school quality processes and improvement in the rural schools due to the time limit. However, school inspection would only be effective when students' outcomes and teaching quality are improved (De Grauwe, 2001; Jaffer, 2010; Santiago et al., 2012). This might be one reason to explain why urban schools' inspection performance in improving education quality was significantly higher than rural schools (Li & Zhu, 2016).

Finally, this research found an interactive effect between participants from urban/rural areas and with senior/junior professional titles on their perceptions of "to promote students' academic achievement" in relation to school inspection purpose. This result showed that junior teachers rated the inspection purpose of promoting students' academic achievement higher than senior teachers among participants from the urban area. Conversely, junior teachers rated it lower than senior teachers among participants from the rural area. The urban

schools' context with a stronger atmosphere of competitiveness and utilitarianism than rural schools (Sun & Xu, 2015) might be more influential in stimulating junior teachers to seek promotion to a higher professional rank than influencing senior teachers who had already been awarded the senior professional title. However, in the rural area, senior teachers with higher teaching effectiveness were found to have higher expectations for students' academic achievement than junior teachers (Yiu & Adams, 2013).

7.2.2 Key Findings RQ2: What are stakeholder perceptions on the importance of different school inspection indicators of school inspection in order to demonstrate education quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

On the survey, participants rated the indicators regarding students' all-round development and well-being (such as students' safety, mental health, enthusiasm for learning, moral values, and relationship with classmates and teachers) higher than indicators regarding students' academic achievement and students' admission rates for senior high schools in order to demonstrate education quality. These well-being indicators above are also perceived by OECD (2011) and Ofsted (2016) to be critical to contribute to school effectiveness. Dijkstra, Geijsel, et al. (2014), OECD (2013a) and the World Bank (2004), argued that students outcomes should be evaluated beyond subject knowledge and skills in some designated areas and include broader learning outcomes such as critical thinking abilities, social competencies, moral attitudes, and overall well-being.

Moreover, this research found that indicators regarding social outcomes, which include students' abilities for controlling emotion, communicating with others, and overcoming frustration, were rated significantly higher by participants from the rural schools than participants from the urban schools to demonstrate education quality. The main reason might lie in that rural students' poor socio-economic background drove them to dedicate themselves to long hours of learning in order to compete with their urban peers (Kipnis, 2001). The heavier workload, along with greater psychological pressure generates a greater need for a relaxed and supportive environment for rural students (An et al., 2007). This might explain why participants from rural schools attached greater importance to students' emotional and social well-being than participants from urban schools.

More than 90% of the survey participants believed that indicators concerning students' participation in the interactive classroom teaching processes where students are treated equally, and independent thinking abilities are developed were the most important to demonstrate education quality in teaching and learning. Students' active participation

emphasises students' initiative in constructing knowledge in collaboration with teachers in the learning process, where students' abilities for thinking critically and solving problems are developed (Zimmerman, 2001). Also, these indicators were deemed to enhance teachers' effectiveness and education quality (OECD, 2013a; Pigozzi, 2006; UNICEF, 2000).

Additionally, 25 indicators concerning classroom teaching and teachers' professional development to demonstrate education quality were rated higher by junior teachers than senior teachers. This might be because senior teachers are less willing to devote effort to improving teaching performance and professional learning after being awarded their senior professional titles (Jianmin, 2017; Karachiwalla & Park, 2017; Minglong, 2013; Qunqing & Haiying, 2016). Conversely, junior teachers might spend more time teaching students and engaging in professional learning in order to achieve a higher professional rank (Chen, 2014; Karachiwalla & Park, 2017; Minglong, 2013).

7.2.3 Key Findings RQ3: What are stakeholder perceptions on the importance of different methods and procedures used in school inspection in order to demonstrate and improve education quality? Are there any differences in the views of participants from the urban area and rural areas? And between junior and senior teachers?

With regards to methods used in school inspection, publication of school performance data was rated highest by 80% of survey participants to demonstrate and improve education quality. Chinese teachers may not be willing to see the publication of inspection reports because publishing a negative performance report could oblige the low-performing schools to strengthen education quality (Ozga, 2013). Next, the importance of using externally-set performance indicators to demonstrate and improve education quality was rated as less important by participants from rural schools than participants from urban schools. Also, it was rated as less important by participants from school 9, which is located in a more highly disadvantaged urban context, than the other schools. According to interviewees, the over-detailed indicators seriously restricted schools' autonomy of development, which influenced the effectiveness of school inspection due to inadequate understanding of school contexts. Similarly, the interviewees from the rural school doubted the feasibility of inspection indicators since some of them went beyond the rural school's capacity. This finding was supported by Li and Zhu (2016), who argued that the quality of school inspection could be improved only when the quality of school inspection standards, approach, and procedure were continuously optimised.

Additionally, this study found that the use of externally-set performance indicators, class observation, and written and verbal feedback used in school inspection were rated

significantly more important by junior teachers than senior teachers. This result could be attributed to the centralised administrative system in China where teachers, particularly the junior teachers are required to observe ready-made criteria of curriculum, teaching, and evaluation (Lee et al., 2008; Lin et al., 2012). However, senior teachers who had been exposed to long-term inspections, supervisions, and appraisals might be tired of trivial teaching and administrative affairs when they gained the senior professional title (Minglong, 2013; Xu & Shen, 2007).

7.2.4 Key Findings RQ4: What are stakeholder perceptions on the strengths and weaknesses of current processes of school inspection to monitor educational quality?

According to interviewees, the current school inspection system in Shandong province is advantageous in that schools possess autonomy to set school targets depending on the individual school context and this aligns with survey participants' views about the lower importance of externally-set performance indicators. This means low-performing schools can set different school targets from high-performing schools based on their school capacities. In this case, both of them are enabled to make progression on their own track of development since the existing gap in education quality between schools cannot be addressed within a short period. Similarly, since 2009, Flemish inspectorates have differentiated school inspections with modifications to their focus and coverage according to which aspects of the external school inspection framework are most pertinent to the particular school being inspected (Shewbridge et al., 2011). Moreover, the statistical results showed that survey participants rated a school's action in response to inspector feedback (70.39%) significantly higher than the rest of items concerning the positive impact of feedback on improving school quality, a finding which is in alignment with the interviewees' perceptions. This finding would be endorsed by De Grauwe (2008), who contended that schools' acceptance and implementation of feedback was key to school improvement. This study also found that according to interviewees, rewards, as a procedure of school inspection, were more advantageous than sanctions in stimulating teachers to work hard. Consistently, survey participants rated rewards were significantly higher than sanctions in motivating teachers to address problems that inspectorates point out. Ofsted also advocated the power of incentives by which schools are judged as 'outstanding' based on inspection standards (Ehren et al., 2013).

With regards to the weaknesses in the process of school inspection, 56% of the survey participants agreed that school inspection often resulted in schools fabricating documents and self-evaluation reports used for school inspection in order to reach the inspection standard.

Moreover, the rehearsed panel interview was identified as a new strategy to cope with school inspection in the Chinese context. These deliberate strategies were categorised by De Wolf and Janssens (2007) as fraud and misrepresentation which were also recognised in previous research (Matthews & Sammons, 2004; Penninckx, Vanhoof, De Maeyer, et al., 2015). Interviewees reported that the main reason for employing these coping strategies might lay in that the inspection criteria are unfeasible in challenging contexts, for example, due to an inadequate understanding of the reality of school contexts. This research found that some of the inspection indicators specified many trivial details which might set barriers for the autonomy of school development. The qualitative evidence provided by the interviewees validated the statistical results in that a focus on quantitative targets distorts the purposes of education (69.27%), and school inspection standards had resulted in narrowing curriculum and instruction strategies (42.64%). The results above are supported by Nelson and Ehren (2014), who uncovered the negative impact of overemphasis on the quantified performance measurement scheme on the "whole and long-term objectives".

7.2.5 Key Findings RQ5: What are stakeholder perceptions on how the inspection system could be improved?

Firstly, according to interviewees, the gap in educational quality between students and schools cannot be narrowed by merely relying on improved school inputs, but also on addressing the poor performance of students and learning and instructional gaps in schools (Uwazi., 2009). The researcher found that equity in learning opportunities, as a common focus of education quality in the international contexts (Ehren et al., 2013; Kyriakides & Creemers, 2008; OECD, 2011; Pigozzi, 2006; UNICEF, 2000) was not reflected in the national and provincial school inspection frameworks in China (see Chapter 3). Therefore, more process-oriented inspection indicators concerning equity, for example, comparing disadvantaged and other students' learning are essential to complement the current inspection framework of Shandong province to promote equity in students' outcomes.

Also, the interviewees recommended employing dynamic and detailed materials such as video and photos when inspecting school documents, which would complement the textual material, considering that the reliability of textual materials was more liable to be influenced by individuals' subjective attitudes. Thus, diverse forms of school inspection evidence were seen as valuable by inspectors (Wilcox, 2000). Similarly, the use of off-site surveys, such as telephone interviews and informal surveys, might work better than formal surveys, which was an idea put forth by the interviewees in order to prevent schools from preparing the answers to survey questions in advance. Additionally, most of the interviewees advocated

unannounced school inspection so that school staff may have no time to fabricate school documentation in order to cater for inspectors' preferences in advance of school inspections. Overall, participants suggested that more attention should be given to the effects of school inspection on improving education quality, rather than the forms of procedures employed in the process of school inspection.

7.2.6 Key Findings RQ6: What are stakeholder perceptions on the policy context of education and school inspection system that influence education quality?

According to interviewees, the implementation of formative evaluation and optional courses in the schooling process demanded by the inspectorates became a formality because it had no direct influence on student enrolment rate of senior high schools in the dominant exam-oriented evaluation system of Chinese students and schools, but only set barriers for realising students' all-round development. Moreover, students are obliged to attend various extracurricular tutoring classes for better academic performance by impinging upon students' break time. This is in line with the findings of the first *China Compulsory Education Quality Monitoring Report*, which demonstrated that almost half of students were suffering great learning pressure which resulted from large amounts of time required for homework and extracurricular tutoring classes (NACEQ, 2018).

As was reported by interviewees, inequity of education quality between schools is mainly reflected in resource allocation and students' quality, which is affected by the socioeconomic background of families (Zhang & Chen, 2017). The discrepancy in the distribution of quality educational resources between the urban and rural area, including the quality of teachers and teaching facilities, still significantly hinder the balanced development of education quality (Zhu et al., 2017). Finally, this research found that given the extensive migration of workers from rural to urban areas in China which accounted for 12% of the total population of China (NBS, 2014) (see Chapter 3), this contextual issue is strongly reflected in interviewees' comments about imbalanced development between schools. According to interviewees, students from migrant-workers families are disadvantaged in academic achievements in comparison with urban students who are more able to access to high-quality educational resources. This finding is aligned with previous literature which indicated that learning opportunities are vital to contribute to education quality (Ehren et al., 2013; Kyriakides & Creemers, 2008; Lee et al., 2016; OECD, 2011; Yiu & Luo, 2017).

7.3 Discussion of the Key Findings

The study findings in relation to each research question outlined above highlight six specific aspects of school inspection and educational quality that require further detailed discussion and critique. These include external accountability of school inspectorates in China, complementation of Shandong province school inspection indicators, equity in education quality to be addressed through school inspection, different perceptions on school inspection system between participants with different professional titles, enhancement of school autonomous development through improvement of school inspection procedures, and improvement of inspection process to support student all-round development.

7.3.1 The external accountability of the school inspectorates in China remains to be strengthened and adapted to the national context.

In the view of the interviewees, the lack of essential, independent power of investigation, examination, and accountability could weaken the school inspectorates' restrained force and authority in China, which may reduce the impact of inspection upon school improvement; this is supported by previous research (Huang, 2009; Zhang, 2011). This seems to explain why school/teacher accountability was rated lower than compliance with legal regulations, school development, and improvement of education quality in demonstrating the purpose of school inspection (see Chapter 5). As an inner division in the education department, the educational inspectorate actually inspects schools on behalf of the local educational authorities. This prohibits the educational inspectorates from effectively and independently exercising an external accountability role in supervising and restraining local authorities and schools (Han, 2011; Zhang, 2011). Brock (2009) research in the Gansu province of China found that giving inspectors the power to report, propose, and support improvements could enhance school development planning because the important process of setting out school targets was measured by inspectors. Therefore, given the reported study evidence, an independent organisational identity is needed to enhance the influence of the inspectorates, which could enable the inspectorates to independently execute power in managing the time and resources so that they can directly bring about improvement and exert greater pressure on schools to comply with legal regulations (Muijs, 2018). Despite the shift in school inspectorates' independent executive power since *The Educational Inspection Ordinances* was issued in 2012 (Song & Yue, 2013), interviewees indicated that inspectorates are still weak and lack external accountability. As suggested by a number of researchers and policymakers, this issue with current school inspectorates could be addressed by separating the school inspectorates from the educational administrative departments so they are

performing executive power independently, but this change would be subject to Chinese policy context (Zhou & Xue, 2018).

Furthermore, the weak external accountability of the educational inspectorates in China has long been attributed to the lack of mechanisms for publishing school inspection performance results. Also, educational inspectorates' power to punish or reward schools has not been formally specified, which negatively influences the effective utilisation of school inspection results (Han, 2011; Yang, 2007). Although many interviewees responded that publishing school inspection performance could potentially have a positive impact on improving education quality, this impact might be smaller than the impact of other social and cultural factors upon parental choice. Parents would likely pay more attention to the enrolment rates for senior high school than school inspection performance, according to interviewees. Likewise, in Singapore, the official school ranking system has long been prohibited in order to rectify the overemphasis on student outcomes (Singapore, 2012). Moreover, interviewees were concerned with parents' limited abilities to interpret school inspection performance correctly, as this could make their decision-making only partly dependent upon rational factors (Faubert, 2009; Waslander et al., 2010). Within the context of China, little consideration has been given to publishing school performance results due to its potential impact on improving education quality and the feasibility of doing so in the context of China. According to an education officer, the publication of school inspection performance might intensify educational inequity, since rich families could choose better schools by purchasing housing in better-performing school districts. Considering the complexity of educational issues, it is unreasonable for schools to take full responsibility for education quality (see Chapter 6); school rankings by inspection performance usually reflect the quality of school intakes rather than the school's contributions to improving student learning (Faubert, 2009). Additionally, greater public accountability pressure could bring about positive impacts by prompting schools to improve their performance, but it could also have a negative influence by increasing pressure on teachers (Altrichter & Kemethofer, 2015; Ehren & Dijkstra, 2014). Therefore, adapting inspection purposes and priorities to the historical and cultural contexts of a country or different areas within a country is essential to investigate if this policy can promote school improvement in a specific context (De Grauwe, 2008).

7.3.2 School inspection indicators used by Shandong province needs to be adapted to better reflect education quality.

As proposed in Chapter 3, in comparison with external theories and the inspection policies found in western countries and other provinces in China, the weaknesses of the Shandong

province inspection framework lie in the absence of indicators regarding an inclusive environment, equal opportunity to learn, structured teaching, teachers' morality, teacher's motivation, a no-violence environment in relation to student physical safety, and students' social competencies and emotional well-being. Based on participants' responses to the questionnaires, the item concerning treating all students equally in classroom teaching (95%) and the item regarding the inclusive environment for all without discrimination (91%) were the highest rated indicators in relation to equity in the schooling process to demonstrate education quality. Here, equity reflected in students' equal opportunities to learn in the process of classroom teaching is seen by survey respondents as an essential component of an effective school, an approach which is supported by Scheerens (2009) and has been employed by the European inspectorates (Ehren et al., 2013; Van Bruggen, 2010). Also, closely related to opportunities to learn, the item regarding structured teaching was rated important/very important by 94% of survey participants, which is significantly higher than other items concerning classroom teaching to demonstrate education quality. Structured teaching can be realised by reasonably allocating a length of time for each task, clarifying the goals of each lesson, and facilitating students to understand the structure of the lesson, all of which have been validated in previous literature on quality of classroom teaching (Kyriakides & Creemers, 2006; OECD, 2011; Van Bruggen, 2010). These findings imply that indicators concerning students' equal learning opportunities in the process of classroom teaching, an inclusive school environment, and structured teaching could be employed to complement the current Shandong province school inspection framework.

Next, both survey and interview findings indicate that an overwhelming proportion of the participants agreed that students' social competencies, emotional well-being, and moral attitudes (e.g., student social abilities and enthusiasm for learning) were the most important foci of education quality and inspection indicators, in addition to student academic outcomes. As confirmed by an education officer, Chinese teachers have started to pay more attention to students' overall welfare, particularly students' feelings and perceptions (see section 6.2.1). A more emotionally supportive environment is essential for students to find more interests, enjoyment, and engagement in school (Zhao et al., 2015). However, in the UK, it was found that only half of all students enjoyed their time at school, so some measures should be taken to improve this situation (Gorard, 2018). Furthermore, the item regarding the school environment without in-school violence was rated highest (92%) out of the items in relation to the school environment to demonstrate education quality. This resonates with findings noted by the previous literature which indicate that an "orderly climate" was regarded as an

effective factor to influence education quality (Pigozzi, 2006; Scheerens, 1990). Ehren et al. (2013) also found it to be commonly used in the school inspection frameworks of six European countries. This suggests that Shandong inspectorates should think thoroughly about including indicators that reflect respect for an individual's unique ability to enjoy fitness, happiness, dignity, and personality (Liu, 2015) when they examine the coverage of inspection indicators in relation to students' outcomes.

Furthermore, the items focused on teachers' concern for students (95%) and morality as critical evidence for teacher's recruitment (92%) were rated highest out of the items regarding teacher's professional development to demonstrate education quality. This finding reflects a study in the US that indicated that teachers delivered moral values in addition to teaching subject knowledge (Joseph & Efron, 1993); this implies that participants see teacher morality as a key indicator for school inspection. In particular, teachers' individual moralities shape the decisions they make in the classroom, such as placing students in homogeneous or heterogeneous groups according to perceived capability level. When students are placed in low-ability groups, their self-esteem might be hurt (LePage et al., 2010). Therefore, quality teachers are those who have a higher level of moral development and are capable of empathizing with students, are tolerant of different opinions and are flexible in their teaching pedagogy (LePage et al., 2010). Additionally, another highly rated item with regards to teachers' working condition (93%) is connected to the teachers' motivation, which has been acknowledged as a critical indicator in previous education quality frameworks (The World Bank, 2018; UNESCO, 2016; UNICEF, 2000). As OECD (2012) indicated, teachers' motivation was deemed to improve learning outcomes particularly for disadvantaged schools, while teachers who are working in an accountability system where the mechanism to promote teacher motivation is absent may minimise their efforts for teaching even if students and parents expect them to do more (The World Bank, 2018). Based on the survey findings in this research, teachers' motivation could be a potential factor to explain the differences in perceptions of senior and junior teachers on the items related to innovative teaching pedagogy, professional development activities and school inspection procedures to demonstrate education quality. This will be further discussed in relation to different perspectives on school inspection system found between teachers with senior/junior professional titles in section 7.3.4. Therefore, the study findings suggest that the key indicators regarding equity in classroom teaching, environment without in-school violence, structured teaching, teachers' morality, and enhancing teachers' motivation would be

beneficial if added to the existing Shandong inspection framework to better evaluate education quality.

7.3.3 School Inspection needs to better address equity aspects of educational quality in the schooling process.

According to survey results, participants from rural areas gave a significantly higher rating to the purpose of school inspection in promoting educational equity than participants from urban areas. This suggests that participants in rural areas may feel more strongly that the school inspection system should be used to address the equity issues that were more related to their own context, considering there still exists a large gap in allocation of educational resources and there is a significant difference in school climate between urban and rural schools (see section 6.4.6 in chapter 6); this is in line with previous literature (Bao, 2006; Sun & Xu, 2015; Zhu et al., 2017). For example, according to a national inspector, schools are required to set in optional courses which could broaden students' knowledge horizons and promote students sustained, wholistic development in the future. However, it is difficult for rural schools and schools in other less developed areas in Shandong province to set up such optional courses due to the lack of funding and teachers (see Chapter 6). The statistical result also shows that the purpose of school inspection in promoting compliance with legal regulations was rated higher by rural school participants than urban school participants. According to an interviewee, rural schools were visited less frequently by inspectors than urban schools, so the limited time available for visiting a rural school might mean that inspectors are unable to effectively examine school management and classroom instruction, and they may instead focus on a simple check of compliance with legal regulations and control of administrative issues (Churches & McBride., 2013; Darvas & Balwanz., 2014). This may subsequently affect the performance level of school inspection in rural schools, which was found to be much lower than urban schools in the latest empirical research in China regarding school inspection performance when measuring school administration, improving education quality, and balanced development of education quality (Li & Zhu, 2016). Since quality school inspection can only be achieved when inspectors improve students' academic performance, learning, and teachers' performance (De Grauwe, 2001; Jaffer, 2010; Santiago et al., 2012), school inspectorates could focus rural school inspections more on indicators regarding teaching and learning in the schooling process instead of a simple legal regulation compliance check so as to promote equity aspects of education quality.

Next, the item regarding accepting children of rural migrant workers to study in the urban schools was the lowest rated among items in relation to compliance with legal regulations to

demonstrate education quality. Although accepting migrant students to study in the urban schools guarantees the basic right of children to be granted compulsory education, according to interviewees from an underperforming urban school (school 9), migrant students tended to underperform in academic achievements, which even influenced school performance. Moreover, teachers from school 9 did not attribute students' poor academic performance to the quality of the school and teacher but instead to the students' migrant families who demonstrate lower socioeconomic status when compared to other urban peers from rich families (see section 6.5.4.2). This was also supported by Yao and Hao (2013) who claimed that the academic performance of the children of migrant workers usually falls behind their urban peers, due to their poor socioeconomic background. Likewise, a study in the context of Shanghai revealed that students' family backgrounds were consistently related to their academic achievements (Liang et al., 2016). However, previous school effectiveness research (Kyriakides & Creemers, 2008; Scheerens, 2015; Scheerens & Bosker, 1997) has revealed schools' impact on shaping variations in student educational outcomes, which matters more for disadvantaged students who are at greater risk of underperformance (Sammons et al., 2017). Thus, it is more important to explore how schools can positively influence students and work to achieve social transformation and inclusion by compensating for students' background characteristics (Murillo & Román, 2011), though schools alone cannot compensate for social inequity. This implies that school inspectors should focus inspection more on indicators that could positively influence student outcomes in the schooling process.

In the schooling process, teachers' expectations have been perceived to be effective on improving students' academic performance (Sammons, 2007; Scheerens, 1990; Teddlie & Reynolds, 2000), since teachers' beliefs which may have substantial influence on their actual behaviour towards learners or their motivation to teach students to the best (Gu, 2014; Pajares, 1992). Research on school effectiveness reveals that students can do better when teachers expect them to perform well, while students can also perform poorly when their teachers expect them to do so (Mortimore et al., 1988; Reynolds et al., 1996). However, unexpectedly, in this research, the item regarding teachers' beliefs that all students can learn was rated significantly lower than other items in relation to classroom teaching as a contributor to educational quality. This contrasts with previous research findings that effective teachers tended to act on their beliefs that all students can learn, accommodate students' diverse needs, and believe that teachers can make a difference through intervention. On the contrary, less effective teachers attribute students' underperformance to their deficits, which hinders students' success (Rosenfeld & Rosenfeld, 2008). In alignment with the comments above

made by the interviewees from school 9, teachers from Guinea and Mexico were not aware of the schools' roles in student failure and dropout, but blamed the students and their family environment (UNICEF, 2000). According to an education officer and a national school inspector, the national inspectorates have not started to take improvement of disadvantaged student's outcomes into consideration when formulating school inspection framework in the Shandong province, which results in the absence of inspection indicators regarding equity in students' academic achievements. Thus, it would be very difficult for school teachers to adequately support students' diverse needs and achieve the desired education goals within a competitive exam-oriented evaluation system (Zhou, 2017). Hence, specific inspection indicators regarding the equity in students' outcomes and learning opportunities (see section 7.2.6) which were missing from the current inspection framework of Shandong province are needed to support students with lower socioeconomic status. As noted by an educational officer, when modifying the current provincial inspection framework, the inspectorates of Shandong province are supposed to pay more attention to the schooling process than school inputs in order to ensure students in different groups are treated equally. This was advocated by Scheerens and Ehren. (2016), who supposed that schooling process factors are more powerful than inputs to explain differences in school quality. Thus, it is necessary to enhance school inspection of those schooling process which contributes to school effectiveness, as there is evidence showing that bright but socially disadvantaged students' outcomes can be improved in high-quality secondary schools (Sammons et al., 2017). This means that schools with a high quality of teaching, raised expectations for student learning and continued formative evaluation could provide equal opportunities for students from diverse groups to learn in the schooling process and may reduce the impact of socioeconomic factors on student academic attainments (Kyriakides & Creemers, 2018).

7.3.4 School inspection system should pay more attention to the enhancement of teachers' motivation to engage in improving classroom teaching and professional learning.

This research reveals that in general, junior teachers are more positive towards inspection indicators and procedures in demonstrating and improving education quality in comparison with senior teachers. For example, for indicators regarding continuously reflecting on effects of classroom teaching, playing a leading role in optimizing teaching design, believing every student can learn, offering personal tutoring for poor students, exploring students' creative thinking abilities, and setting optional courses, junior teachers tended to give higher scores than senior teachers (see section 5.3.2). This might be because junior teachers, as the young and middle-aged teachers who act as the backbone of classroom teaching and research at

school, are more motivated to devote effort to lesson plans and interacting with students in order to obtain further promotion (Chen, 2014; Karachiwalla & Park, 2017; Minglong, 2013). Additionally, previous research (Brown et al., 2011; Wang, 2010) also raised concerns about teachers learning and adapting to new teaching concepts, materials, strategies, and evaluation systems, which pose challenges for older and more experienced teachers who tend to observe rules and lack the same motivation to accept new educational concepts as demonstrated by junior teachers. Similarly, indicators concerning teachers' professional development received more attention from junior teachers than senior teachers, such as abilities for developing school-based curriculum, teachers' collaboration in preparing for class, open discussion about pupils' learning difficulties, and so on (see section 5.3.2). In line with the statistical results, junior teachers held positive attitudes towards professional learning, believing it is an effective, efficient way to improve their teaching abilities. In contrast, senior teachers thought that engaging in research activities such as paper publication had less impact on improving student outcomes in comparison with attending teaching activities, but to do so would only aggravate their workload (see section 6.5.2). This result reflects junior teachers' greater motivation or incentive for teaching and professional learning, since teachers' promotion can only be realised when teachers reach the requirements of age, degree, paper publication, and teacher appraisal performance (Ding & Lehrer, 2007; Liu & Onwuegbuzie., 2012). Thus, a junior teacher may be more concerned with the content to be examined in teacher appraisal (Xiaofeng & Ng., 2011). Particularly in the urban area, as shown in the statistical results, junior teachers tended to rate the purpose of school inspection in promoting student academic achievement higher than senior teachers. This result may be attributed to the stronger atmosphere of competitiveness and utilitarianism in urban schools where there are more senior teachers than are found in rural schools (Li, 2016; Sun & Xu, 2015). Junior teachers might thus be more motivated than senior teachers to seek career advancement (Karachiwalla & Park, 2017) by promoting student academic outcomes, since students' academic achievement is the most important determinant in evaluating teachers' performance and subsequently affects the promotion of junior teachers (Liu & Onwuegbuzie., 2012). However, in contrast, as revealed by numerous studies in China, some of senior teachers do not pay much attention to improving teaching performance or pursuing further professional development, and they even withdraw from their teaching positions and transfer to administrative posts once they have been awarded senior professional titles (Jianmin, 2017; Karachiwalla & Park, 2017; Minglong, 2013; Qunqing & Haiying, 2016). This suggests that

professional rank characteristics may influence teachers' ongoing impetus to engage in improving classroom teaching and professional learning.

Based on the statistical results, junior teachers perceived the procedures applied in the process of school inspection, such as externally set performance indicators, frequency of school inspection, observation of classroom teaching, written and oral feedback from external inspectors, and school self-evaluation to be more important to demonstrate and improve education quality when compared with the responses of senior teachers. Accordingly, junior teachers tended to give a higher rating than senior teachers to the impacts of school targets, feedback from the external inspector, and internal self-evaluation on monitoring and improving the quality of classroom teaching, identifying additional weaknesses, and improving student outcomes and overall performance of the school. In China, as school inspectorates are usually regarded by schools as senior authorities, especially for junior teachers who do not have enough experience in preparing for school inspection; such teachers are liable to work as technicians who strictly adhere to the guidance of the defined evaluation system (Lee et al., 2008). Because teachers' performance in school inspection also affects their career development, this could be a potential incentive for junior teachers to be more obedient to school inspection system than the senior teachers. Additionally, the research suggests that junior teachers' teaching competencies can be enhanced through school self-evaluation since teachers are willing to challenge each other and utilize the outcomes constructively when they are not exposed to risks of external criticism (McNamara & O'Hara, 2006). Also, school self-evaluation can help teachers prepare better for external school inspection (Lee et al., 2008). However, the senior teachers do not seem to welcome the visits by school inspectors for fear of the extra workload required in preparing for school inspections (see section 6.3.2.4). This may be because teachers who have been exposed to multiple years of inspections, supervisions, and evaluations may be tired of dealing with trivial teaching and administrative affairs and lose enthusiasm and motivation for teaching and research, particularly once they were awarded senior professional titles (Chen, 2014; Minglong, 2013; Xu & Shen, 2007).

The evidence above indicates that different ranks of professional titles might affect teachers' views, which thereby suggests that a sustainable incentive is required in order to motivate senior teachers to be continuously devoted to improving teaching and professional capabilities. In the view of interviewees from a low-performing school (school 9), rewarding high-performing teachers is an essential incentive to stimulate and sustain teachers' working enthusiasm, given that teachers with higher teaching effectiveness tended to have higher

expectations for and were more motivated to improve student academic achievements than those teachers with lower teaching effectiveness in the rural area (Yiu & Adams, 2013). Similarly, as the statistical results noted, in the rural area, senior teachers with higher teaching effectiveness seemed to rate the importance of school inspection in promoting student academic outcomes higher than junior teachers with lower teaching effectiveness. As stated in section 7.3.2, the gap in the existing school inspection framework of Shandong inspectorates in light of teachers working conditions regarding motivation needs to be addressed, especially since teachers' motivation has been acknowledged to be an essential contributor to education quality (The World Bank, 2018; UNESCO, 2016; UNICEF, 2000). Nonetheless, the evidence and reasons to explain the impact of staff characteristics on their perceptions of school inspection processes are rather limited. Previous studies mostly tended to distinguish participants' perspectives according to their school positions, but rarely by their professional titles. Therefore, more studies which concern the powerful impact of these characteristics on desired and unintended effects of school inspection are required in order to maximise the developmental impact of school inspections while reducing the burden on schools and their staff members (Penninckx, 2017).

7.3.5 School inspection methods/procedures should be improved to better accommodate school contexts and promote school autonomous development.

What is noteworthy is that schools in Q city are autonomous to set up school targets about which indicators and the number of indicators to be achieved based on school characteristics and contexts. In the perspective of the headteacher from a low-performing urban school (school 9), it was an advantage that the school inspectorates allow schools to set targets based on the school context. Particularly for disadvantaged schools, achieving a better school performance than the school's previous performance is more important than reaching the inspection standard itself (see section 6.3.1). Even so, the purpose of compliance with legal regulations was still given the highest rating by participants. This may originate from the stronger bureaucratic accountability found within the highly centralised system in China where teachers are required to adapt themselves to the defined inspection system by following its directives mechanically (Lai & Lo, 2007). However, it was found in middle-and-low-income countries that overemphasising compliance focused simply on checking regulations during school inspections was unconnected with school improvement and may even distract schools from focusing on actual school improvement (Chen, 2011; Darvas & Balwanz., 2014; Uwazi., 2009). Although two-thirds (66%) of participants agreed that current performance indicators are appropriate for evaluating education quality, interviewees from

both the ordinary rural school and low-performing urban school felt that certain current performance indicators were weak in operability and feasibility for evaluating education quality, which is due to the inadequate and ineffective research on school context conducted by school inspectors (see section 6.3.2.2). For example, a teacher from a low-performing school (school 9) complained that school's intake of students with low socioeconomic status as compared to other schools made it difficult to finish teaching plan on time as required by the inspectorates. Also, according to interviewees, indicators specified many details regarding teaching and schooling practice, such as the time limit for students to stay at school, which limits the space for school development and teachers' autonomy to flexibly employ teaching approaches that accommodate different teaching contexts (see chapter 6). Thus, the statistical results show that 61% of participants agreed that during inspection visits, teachers would prepare and better structure their lectures in order to reach inspection standards. As reported by interviewees, schools fabricated school documents (e.g. self-evaluation reports) and rehearsed panel-interview when it was difficult for the school to satisfy the requirements of indicators. This indicates organisational performativity as conceptualised by Nelson and Ehren (2014), who argued that schools would pre-arrange classroom teaching in an inspection-approved way to achieve a high score on school inspections. Thereby, school inspectors would hardly see the real situation of school quality based on school's "performance", which to some extent might harm the quality of school inspection. Although a comprehensive and detailed framework could increase the reliability of school inspection (Muijs, 2018), it would also lead to undesirable effects from the school inspection process, such as reduced validity if school contexts are not considered sufficiently (Carlbaum, 2016; McCrone et al., 2007). As indicated by a rural school headteacher, the difficulty in accommodating these unpractical indicators might make inspectors lower the inspection standard when inspecting the rural school.

The survey and interview findings presented above reflect the weak operability and feasibility of the current school inspection indicators, which is due to the lack of the context-based research evidence. Thus, it is necessary to make school inspection frameworks available to schools and inspectors, which could generate a more bottom-up and unified method to improve school development planning, which means that the needs of schools and local communities could be better accommodated (Brock, 2009). However, this does not mean that the inspectorates should lower the standards when inspecting those underperforming schools. Rather, the nationally agreed criteria for school inspection is still essential, since it is advantageous in keeping schools focused on core quality indicators in a more systematic way

(OECD, 2013a). Q city has given schools the autonomy to set targets for school inspection, which is in alignment with OECD (2013a)'s suggestions that school inspectors focus external school inspection on the particular area in the school that needs the most attention. This way, developing inspection standards and approaches to collecting data with schools and local stakeholders might enhance school capacity but may also set expectations for evaluation and improvement and institutionalise external inspection criteria (Ehren et al., 2017).

The extensive use of coping strategies also indicates the headteacher and teacher's respect for bureaucratic authority and hierarchy which ensures that school staff will seek to comply in any possible way with the predetermined standards. Additionally, the item regarding the school's implementation of inspector feedback was rated significantly higher than other items, which not only highlights participants' acceptance and strong motivation to implement inspectors' feedback, but also their respect for the authority of the inspectorates. A higher proportion of survey (70%) and interview participants (more than half) consistently showed positive attitudes towards the feedback given by the external inspectors in improving their teaching practice. As far as Whitby (2010) was concerned, effective external school inspection was most likely to be brought about in collaboration with the schools in that both the focus and content of the feedback should be accepted by schools.

Furthermore, more than 60% of participants and all the interviewees reported that preparation for school inspection increased teachers' workloads, added pressure, and disrupted the normal teaching order. This is particularly true in rural schools, as the statistical results show that a significantly higher proportion of participants from the rural area than participants from the urban area agreed that preparing for school visits distracted them from teaching and learning and they felt pressure for their school to do well overall in school inspection. One of the most important reasons might be that in many Chinese rural schools, an insufficient number of qualified teachers exists in order to fill all available teaching posts (Liu & Onwuegbuzie., 2012) since urban schools with better working conditions are more attractive for teachers (Vegas, 2007). Consequently, according to the perspective of the headteacher from an ordinary rural school, the teachers who work in rural schools, though limited in number, must undertake more teaching tasks than their urban peers. Thereby, when teachers spend a great amount of time preparing for school inspection, it would inevitably reduce their teaching time. More importantly, rural school teachers with lower educational attainment are evaluated against the same inspection standards as the urban school teachers, which could explain why rural teachers feel more pressure than their urban peers to improve their teaching practice. Similarly, participants from a low-performing urban school rated the statements

regarding their pressure to satisfy the inspection standards in teaching and overall school performance higher than participants from other schools. Thus, it would be more important to reduce the undesirable impact brought by school inspection on normal teaching and learning so as to better accommodate the needs of the school.

Since the Chinese inspectorates attach more importance to hierarchical and administrative accountability than external accountability, school teachers who have had long-term exposure to the Chinese centralised accountability system are essentially deprived of their self-determination and individualistic tendencies (Lin et al., 2012). Thus, imposing changes on schools through a top-down approach could only establish incentives for mere compliance to the predetermined administrative regulations but not for improvement and innovation (Faubert, 2009). The tasks for the preparation for an upcoming school inspections seemed to be driven by externally imposed supervisory arrangements rather than internally-reinforced, shared commitments to school-based autonomous development (Fu, 2006). According to the interviewees, the frequency of school inspection depends on the effects of previous school education quality inspections; frequency is not the goal of school inspection but only an approach to supervising schools. Frequency of school inspection should be arranged according to schools' needs in that underperforming schools could be visited more frequently than higher-performing schools in an attempt to continuously align their self-evaluations and daily practices with inspection standards (Ehren et al., 2015). Different from top-down accountability-oriented approaches which tend to make underperforming school teachers and leaders feel anxious about being told how to improve, internal school improvement has been found to be more effective in improving students' academic outcomes in Shanghai (Jensen & Farmer, 2013). Following participants' suggestions, the regular school visits could be incorporated into schooling processes, which means schools are not informed in advance and are unable to spend extra time preparing for school inspection, but then they are able to showcase the real status of schooling quality to inspectors. Also, this approach could reduce the teacher's workload and alleviate the pressure experienced in over-preparation for inspectors' school visits. Likewise, since 2015, schools in Hong Kong have been selected randomly for external school inspection, instead of conducting it in a fixed cycle in order to "better position external school review as an ongoing measure to complement school self-evaluation" (EDB, 2015, p. 3). Therefore, the inspectorates must initiate a range of evidence-based localised studies, monitor their impact, and use results to inform modifications to improve the existing provincial school inspection framework to tailor to specific contexts and accommodate students' needs.

7.3.6 School inspection processes and outcomes need to better support government policy on students' all-round development.

The evidence emerging from this research indicates that the measures applied in schooling practice, such as the formative and comprehensive approach to evaluating students were not functioning well in promoting students' all-round development under the exam-oriented examination system. Inspection indicators in aspects of new curriculum reforms aiming to promote students' all-round development, such as using the results of the formative assessment to evaluate students (from Shandong province), were perceived by more than 90% of the survey participants to be important/most important in demonstrating education quality. However, according to the interviewees, in contradiction with survey participants' perceptions, students' academic achievements were always placed first and students' non-academic competencies were deemed to be irrelevant when students' academic achievement was shown to decline in the student evaluations. All schools investigated by the researcher established individual student portfolios to record their performance comprehensively and continuously. Nonetheless, interviewees typically saw formative evaluation as a formality due to the difficulty in effectively measuring students' non-academic competencies, such as students' moral values, as well as the intangible impact of the non-academic performance on final summative academic test performance. For instance, students' self-evaluation results might be less persuasive than academic scores when considered innovative teaching pedagogy, according to a senior teacher (see section 6.5.3). Given the fact that passing the senior high school entrance examination (*zhongkao*) is the only way for junior high school students to enrol in a senior high school, interviewees noted that students' academic performance, particularly in the admission rates for senior high school, was still the major criteria for either parents/the public or educational authorities to evaluate school quality in the prevailing exam-oriented evaluation system (see section 6.5.3). According to Kipnis (2001), this situation seems to be intensified in rural schools where students experience a larger workload along with psychological pressure to achieve advantageous academic outcomes if they seek to compete with urban students for a decent urban job. Therefore, rural schools have to place more emphasis on student academic outcomes than the development of student non-academic outcomes. To some extent, this explains why rural school survey participants tended to rate "a focus on quantifiable targets distorts the purposes of education" significantly higher than urban school participants. Next, the indicator (from Shandong province) regarding assigning an explorative assignment to students was rated lowest among indicators in relation to student learning. This may be attributed to the fact that students' prior tasks were to master cognitive knowledge required by academic examination in China, despite that

interviewees thought improving students' abilities for creation and exploration was equally important. Dello-lacovo (2009)'s research findings in Shandong province also indicate that if students are required to finish both creation-oriented assignments and knowledge-oriented assignments, their workload would be increased, which might go against the national policy of decreasing students' learning burden. Similarly, interviewees confirmed that students' learning pressure was primarily driven by intense curriculum schedules, homework pressure, and extra curriculum tutorial classes (see section 6.4.5 in Chapter 6), which was identified in the first *China Compulsory Education Quality Monitoring Report* (NACEQ, 2018). However, this report also revealed students' lack of critical thinking abilities in being able to apply their scientific knowledge. As argued by Zhou (2017), in opposition to the primary educational purpose of developing students critical thinking and creative abilities, under the exam-oriented education system, students and stakeholders are liable to overlook the development of individuality, inquiry, and independent thinking abilities and routinise non-academic evaluations. A national inspector supported this by pointing out that independent thinking ability could not be obtained by mechanically memorising existing facts and repeating others' ideas to solve problems.

According to Ofsted's director Tryl (2018), it would be somewhat pointless to rigorously uphold academic standards if pupils' safety is not ensured and pupils are not educated to act as active citizens. Also, a teacher from an underperforming urban school (school 9) added that the dominant criteria of academic achievement exert so much pressure on school teachers that they dare not employ innovative teaching pedagogy and update their educational vision (see section 6.3.2.2). Similarly, Ofsted started to challenge schools where students spend excessive time in preparing for academic exams at the cost of teaching, which narrows students' choices though boosting schools' league table positions (Muijs, 2018). In this sense, the implementation of curriculum reform only resulted in superficial changes in curriculum and teaching methods rather than fundamental changes in evaluation system and putting extra workload and pressure on school leaders and teachers as a result of disconnections between inspection instrument and policy context of education (Walker et al., 2012, p. 167). In other words, according to interviewees, changing the content of curriculum, classroom teaching methods, and inspection criteria without changing the actual student evaluation system for entrance to higher education levels suggests that the current school inspection system may be mismatched with the actual educational evaluation context and so cannot really promote student all-round development. Even so, it is not realistic to abandon the current exam-oriented evaluation system, considering China's large population and complex admission

system (Zhou, 2017). Although the national inspectorates have planned to conduct new thematic nationwide school inspections with a particular focus on reducing students' learning pressure and promoting their all-round development from 2019 (MOE, 2018), a systematic strategy that integrates curriculum, teaching and learning tactics, and targeted evaluation instruments (Liu, 2015) is still desired to facilitate students' all-round development in practice.

7.4 Chapter Conclusion

This chapter has discussed interpretations of the key findings with a focus on the existing issues in the current school inspection system of Shandong province in terms of purposes, indicators, and suggestions for its improvement, as well as the effects of school location (urban/rural) and teachers' professional rank (senior/junior) on participants' perceptions. The key interpretations of the research findings include the weaknesses in the external accountability of the educational inspectorates in China which could be strengthened but should be better adapted to the national context. This interpretation was made based on participants' lower rating on school accountability as a purpose of school inspection, in comparison to improvement. It was also made based on interviewees' perspectives on inspector's roles in the practice of school inspection and the policy context which lacks sanctions and publication of school inspection performance as forms of external accountability. The second interpretation of the research findings was regarding the gap that needs to be addressed in inspection indicators for Shandong province in relation to education quality. This interpretation was based on participants' responses to the importance of each indicator to demonstrate education quality and the weaknesses in the school inspection framework of Shandong province, which were identified by a comparison with previous international and local literature. The third interpretation of the research findings highlighted equity issues in students' outcomes within and between schools which need to be better addressed in the inspection system in China. This interpretation was based on the perceptions of participants regarding the lack of attention to educational equity in students' outcomes and schooling process. The fourth interpretation was related to the need for the school inspection system to strengthen teachers' motivation to devote their time and effort to teaching and professional learning. This interpretation was based on the statistical results which revealed that junior teachers gave a higher rating to items related to innovative pedagogy, student all-round development, teachers' professional development and the positive impact of school inspection on improving education quality. The fifth interpretation was emphasising that

school inspection procedures should be improved to better accommodate school contexts and promote school development autonomy. This interpretation was based on participants' comments on the weaknesses in some indicators' feasibility, the employment of coping strategies to deal with school inspection, the high approval of inspectors' feedback, and the increased workload in preparation for school inspection, as well as interviewees' suggestions for improving the school inspection procedures to reduce teachers' burdens, enhance the quality of school inspection, and better accommodate schools' needs in improving education quality. The last interpretation was concerning the necessity to enhance school inspection processes and outcomes in order to better support the government policy on students' all-round development. This interpretation was drawn because survey participants foregrounded the importance of indicators regarding students' all-round development to demonstrate education quality, which conflicted with interviewees' perceptions of the poor quality in implementation of the indicators regarding student all-round development in the schooling practice due to the dominant exam-oriented evaluation system. These interpretations reiterate evidence in the previous international and local literature regarding the effective factors of education quality and the impacts of school inspection on improving education quality. In the following conclusion chapter, the discussion will include what is new and original about this study and findings, the implications of this research in theories and policy practice, the limitations of the research methods, and suggestions for future research.

Chapter 8 Conclusions

8.1 Introduction

The aim of this study is to explore the strengths, weaknesses and overall quality of school inspection policies and practice in China and examine in one city region stakeholder perceptions of inspection purposes, content, processes, outcomes, and context, as well as the potential to improve inspection practice and compulsory education quality in China. It has been shown through an analytic review of local literature that there is currently a lack of empirical research regarding the impact of school inspection on education quality in China. This study has investigated participants' perceptions on the importance of a variety of inspection indicators and procedures (identified from Chinese and international literature) to demonstrate and improve education quality, as well as the differences in perceptions of participants with senior or junior professional titles from rural or urban schools. This study, therefore, has enriched local literature by providing empirical evidence regarding potential improvements to the school inspection system in alignment with the policy context of education reforms. This chapter underlines the main contributions of this study to theoretical literature and school inspection system in China through an overall account of participants' perceptions on the roles and the practice of school inspection in demonstrating and improving education quality. This chapter also presents an account of the limitations of this study and ends with suggestions for future research on the evaluation system of education quality in China.

8.2 Main Contributions

This research examines school inspection and related effectiveness factors in the Chinese context and contributes some empirical evidence to enrich existing school effectiveness theory, which has been frequently tested in industrialised countries, but rarely in developing countries (Teodorovic, 2009). This gap in previous literature was addressed by highlighting the overlapping focus of education quality internationally and identifying the most and least important cited school inspection indicators underpinned by international and local literature (see chapter 2 and chapter 3) according to the view of Chinese stakeholders. In addition, new empirical evidence was collected to explore the inspection system and education quality according to participants in Shandong province. Specifically, this research measured the importance of four types of inspection indicators, including compliance with legal regulations, school organisation and management, teaching and learning, and outcomes to demonstrate

education quality. As a result, the indicators that participants rated highest overall in demonstrating the education quality were concerning students' non-academic outcomes (social competencies, physical and emotional well-being), classroom teaching (structured teaching and equity in classroom teaching), and teacher professional development (teachers' morality and teacher's motivation); this result suggests new inspection indicators could complement the current inspection framework of Shandong province. Moreover, reflecting and emphasising government policy on facilitating students' all-round development, the indicators in relation to students' non-academic outcomes were perceived to be more important than indicators concerning students' academic achievement in order to demonstrate education quality.

Overall, this research reports new empirical evidence regarding the strengths and weaknesses in the process of school inspection, as well as the impacts brought by school inspection standards and procedures which have been applied in Shandong province. This contrasts with previous research, which typically is more speculative rather than evidence-based for local literature regarding the school inspection system, with around 90% of studies being essentially reviews of international literature and few reports of empirical studies relevant to the impact of inspection in the context of China (Li et al., 2016). This study found that the inspectorates of Shandong province have delegated power to schools to set some school targets based on school contexts. Although schools could decide on the number and type of inspection indicators that they are able to reach before the next school inspection, some of the criteria were deemed to be unpractical to achieve, especially for disadvantaged schools, due to inspectors' inadequate understanding of school contexts. As a result, a key finding of this study is that schools seem to respond to these challenges quiet often by presenting inaccurate documentation and other fraudulent behaviours in order to meet the inspection criteria (see Chapter 6). Nelson and Ehren (2014) perceived this organisational performativity to harm the quality of school inspection. Also, the indicators that specified many details related to the schooling and teaching practice would limit school development and teachers' autonomy in being able to accommodate diverse student needs by employing different pedagogies. Next, as an unintended consequence of school inspection, preparation for school inspection aggravates teacher workload, increases pressure and distracts them from their teaching work. Rural schools, which have frequent teacher shortages and poor teacher quality, might face more pressure than urban schools when evaluated against the same inspection standards. Additionally, empirical evidence also identified schools' acceptance and implementation of feedback from school inspectors, which had positive impacts on improving teaching practice

and school management; rewards were deemed to be more effective than sanctions to stimulate teachers to work hard. In response to the weaknesses in the process of school inspection, new empirical evidence emerged to provide suggestions for improvement of the school inspection system. The key suggestions include inspection of multiple forms of school documentation, employment of different forms of surveys, and using 'surprise' inspections where the schools are not informed ahead of the event, which aim to prevent schools from fabricating school documentation and using other fraudulent strategies to deal with school inspection.

Furthermore, the empirical evidence also identified other potential challenges that might face the Chinese inspectorates and the education system more broadly (see Chapter 6). Specifically, this study found that the highest rated purposes of school inspection were promoting schools' compliance with legal regulations and school development, in contrast to the lowest rated purpose of accountability. This may originate from the relatively weak role of public accountability in Chinese inspectorates, because the inspectorates have no independent power to reward or punish schools and school inspection performance reports are not published for the general public in comparison to other countries, such as UK and the Netherlands, where public accountability is emphasised (OECD, 2013a). Next, a key finding indicated that school inspectors were found to place more emphasis on compliance with legal regulations when inspecting rural schools rather than on improving student academic achievements, learning, and teaching, which contrasted with their foci when inspecting urban schools (De Grauwe, 2001; Jaffer, 2010; Santiago et al., 2012). This may generate inconsistent inspection quality between urban and rural areas. Moreover, with regards to the challenges recognised in the education system, this study revealed that a large gap exists not only in distribution of educational resources between urban and rural areas, but also in academic achievements between students from migrant-worker families and students from families with higher socioeconomic status. However, as revealed in this study, it seemed that promoting equity in student academic outcomes has not received enough attention from the national inspectorates. In addition, this study argued that it was challenging to implement inspection indicators regarding student all-round development in practice, such as student formative evaluation since academic outcomes remain as the major criteria to evaluate school quality. Consequently, student workload and pressure were increased due to the intense curriculum schedules, homework, and extra-curricular tutorial classes, as stated in *China Compulsory Education Quality Monitoring Report* (NACEQ, 2018).

Finally, the existing research around the impact of personal characteristics on participants' attitudes towards school inspection systems also lacks evidence on the impact of the participants' professional titles. Previous studies have mostly claimed that teachers had different attitudes from headteachers regarding school inspection effects because of their strong identification with the school (Penninckx, 2017). This study has claimed that the different perspectives on school indicators and procedures between junior teachers and senior teachers might be affected by their different expectations for career development. Specifically, the inspection indicators regarding innovative classroom teaching and teachers' professional development, and inspection procedures regarding externally-set performance indicators, class observation, and feedback provided by external inspectors were rated significantly higher by junior teachers than senior teachers.

8.3 Implications of the Study

8.3.1 Implications for Theoretical Literature

This research highlighted equity as a key issue in terms of education quality particularly concerning the gap in students' academic performance between urban and rural schools, which linked to the diverse socioeconomic backgrounds of students' families. As discussed earlier in Chapter 3, in order to address the issues regarding educational equity, the national inspectorates have been engaged in promoting the balanced distribution of educational resources across different regions by monitoring local inspectorates at each level in order to increase investment in school infrastructure and teacher resources, especially at rural and low-performing schools (Zhu et al., 2017). As a result, this study found that the existing gap in teacher quality and educational resources between rural and urban schools still influences equity in education quality, which cannot be addressed within a short period. Moreover, as suggested by participants, the equity issues related to the imbalanced development of schools in student academic outcomes were deemed to be the ultimate goal of education but had not yet received sufficient attention from the Chinese national inspectorates. According to school effectiveness theories, schooling process factors are more powerful than inputs to explain differences in school quality (Scheerens & Ehren., 2016). Thus, it is more important to explore how schools can positively affect student outcomes in an inclusive environment in order to compensate for students' disadvantaged socioeconomic backgrounds (Murillo & Román, 2011). Sammons et al. (2017) also argued that the academic achievements of bright but socially disadvantaged students could be improved by high-quality schools which might reduce the impact of socioeconomic factors on their academic outcomes. As mentioned

earlier, this research confirms and adds support to current Shandong province inspection framework by identifying the key effectiveness factors in China, which include equity in student academic outcomes, student social competencies, physical and emotional well-being, structured teaching, teachers' morality and motivation, and equal opportunities to learn. This requires Shandong province inspectorates to ensure students' equal opportunities to learn in the schooling process by strengthening structured teaching, teachers' morality, and teachers' motivation in order to close the gap in student academic outcomes within and between schools. As overall school effectiveness encompasses two crucial dimensions of high quality and high equity, research is needed to figure out which features of schools and teaching can promote school effectiveness with respect to both quality and equity (Kyriakides & Creemers, 2011).

In addition, this study presented empirical evidence regarding the inconsistent quality of inspection between urban and rural areas in Shandong province, in line with Li et al. (2016)'s finding that inspection quality in urban areas was significantly better than rural areas in boosting education quality. More specifically, in this research, participants from rural schools tended to give a higher rating to school inspection purpose in promoting compliance with legal regulations in comparison with participants from urban schools. This result suggests that school inspectors may have placed more emphasised on compliance with legal regulations rather than on improvement of student learning and teaching when inspecting rural schools within the limited inspection timeframe. However, the quality inspection could only be achieved by improving student academic achievements, learning and teaching (De Grauwe, 2001; Jaffer, 2010; Santiago et al., 2012). Thus, this implies that school inspectors should further improve the quality of school inspection in rural schools by focusing more on indicators regarding teaching and learning instead of a simple check of compliance with legal regulations.

This study also contributes to the local and international literature by presenting empirical evidence that junior teachers, when compared with senior teachers, tended to give higher ratings to indicators (e.g. innovative classroom teaching and teachers' professional development) and inspection procedures (e.g. externally-set performance indicators and inspector's feedback) to demonstrate and improve education quality. The reasons for these results may suggest that junior teachers are more motivated than senior teachers to devote time and effort to lesson planning, interacting with students, and professional learning to effectively and efficiently improve their teaching abilities in order to obtain further promotion (Chen, 2014; Karachiwalla & Park, 2017; Minglong, 2013) when they reach the age, degree,

paper publication, and performance required by teacher appraisal and school inspection (Ding & Lehrer, 2007; Lee et al., 2008; Liu & Onwuegbuzie., 2012). In contrast, as revealed in this study, senior teachers seemed to be passive about the visits by school inspectors and activities of teacher professional development for fear of the extra workload. Similarly, senior teachers were found in previous research to be tired of and demotivated to teach, seek professional development and deal with school inspections after experiencing innumerable evaluations and especially after being awarded senior professional titles (Chen, 2014; Jianmin, 2017; Karachiwalla & Park, 2017; Minglong, 2013; Qunqing & Haiying, 2016; Xu & Shen, 2007). The findings above imply that a sustained incentive is needed to motivate senior teachers to continuously engage in teaching and professional learning, considering senior teachers' positive influences on improvement of student academic achievements (Chu et al., 2015). Also, as reported by an interviewee from a low-performing school, rewards from either school or city educational department are effective incentives to stimulate and maintain teachers' enthusiasm for working. Based on the earlier argument of this study, indicators regarding teachers' motivation could complement current Shandong province inspection framework to better reflect education quality. Considering that the existing evidence is rather limited to explain the differences in perceptions between teachers with senior and junior professional titles (Penninckx, 2017), further research on the impact of teachers' professional titles on the school inspection system is required in order to maximise the developmental impact of school inspections while reducing the burden on schools and their staff members.

8.3.2 Implications for School Inspection System

This study contributes new empirical evidence to the local and international research around the school inspectorates' roles in public accountability, which is weak in China, in contrast to what is typically seen in European countries. The first reason may be that in this study, school inspectors were found to possess no independent executive power to reward outstanding schools or punish failing schools. In Chapter 3, it was outlined that the MOE claims that following the release of *Educational Inspection Ordinances* in 2012, the effectiveness of educational inspectorates is expected to be enhanced by granting them independent executive power and equal standing with other educational administrative departments. However, evidence from this study unexpectedly indicates that the new policy has not entirely come into force. As noted by the interviewees, as an inner division of the MOE, the school inspectorates are actually authorised by the MOE to inspect their own schools, which largely debilitates the authority of the educational inspectorates to perform their roles with external accountability (Zhang, 2011). Thus, this finding implies that educational inspectorates'

restrained force and authority needs to be strengthened by separating the school inspectorates from the MOE to perform inspectorates' roles independently while still subject to the Chinese policy context (Zhou & Xue, 2018), considering that the power of investigation, examination, and accountability are essential and inter-related in complete administrative supervision (Huang, 2009; Zhang, 2011).

Also, this study argued that weak external accountability could also be attributed to the absence of practical mechanisms for publicly releasing school inspection performance reports, despite stakeholders in Shandong rating highest the importance of publication of school inspection performance to demonstrate and improve education quality. Different from the western countries where publications push low-performing schools to strive for school improvement (Ozga, 2013), in the view of the interviewees, Chinese parents would pay less attention to any published school inspection performance reports than they would to the enrolment rates of senior high schools, which would be more persuasive to reflect the junior high school's quality (see chapter 6). Moreover, according to the interviewees, the publication of school inspection performance might generate chaos in society, stemming from intensified educational inequity. For instance, based on published school inspection performance, rich families would be more likely to choose a high-quality junior high school by purchasing housing in that school district. Additionally, an interviewee was concerned with parents' abilities to interpret school rankings correctly since results-oriented school performance is measuring the quality of school intakes, which is misleading and does not take into account the schools' contributions to improvements of student learning (Faubert, 2009). Therefore, the findings overall imply that it is essential to adapt inspection purposes and priorities to the historical and cultural contexts of countries or different regions within a country in order to investigate if this policy can bring about improvement in that context (De Grauwe, 2008).

In addition to the relatively weak external accountability, this research also highlights the key role of Chinese inspectorates in requiring schools' compliance with previously-set rules, regulations, and standards in the Chinese hierarchical administrative system. However, it was revealed that an over-emphasis on "follow the order" might limit school development and teachers' autonomy to flexibly adapt their pedagogies to classroom practice, without sufficiently considering school contexts, a challenge indicated by the participants. For instance, as shown in this study, participants from the rural school and low-performing urban schools complained that some of the externally-set performance indicators with low feasibility and operability exceeded the school's capacity. This result may to some extent be

ascribed to the lack of the evidence-based research on school context in formulating school inspection frameworks, but this does not mean that the school inspectorates should use a different or lower standard to evaluate those low-performing schools. Rather, the implication of this is that empirical studies need to be better tailored to the school and regional needs by researching the applicability of school inspection procedures and then subsequently developing inspection standards and approaches based on the data collected with the schools and local stakeholders (Ehren et al., 2017). Therefore, in order to strengthen our understanding of the feasibility of inspection indicators and approaches in a broader range of areas, it is necessary to understand why some indicators and approaches fit in one context and why some do not, so that more powerful school inspection policies and more complete explanations regarding the effects of school inspection could be generated in different contexts. Moreover, both schools' acceptance and action on inspectors' feedback and school staff's fraudulent strategies highlighted by the participants reflects their high sense of respect for bureaucratic authority. Thus, the study findings imply that always imposing changes on schools by using a top-down approach may demotivate teachers and schools and impede schooling practices which improve and innovate; this is supported by Fu (2006), who claimed that teachers' well-prepared "performance" in school inspection was seen as a passive response to externally-imposed supervision rather than a self-driven commitment to school-based autonomous development. As suggested by this study, school inspectors would be more able to know the real circumstances of school quality through an unannounced school visit to avoid situations in which schools' performativity caters to inspectors' preferences. This research agrees with the conclusions of Penninckx et al. (2016), who argued that the characteristics of schools, such as its innovative capacity, supportive professional relationship, and so on, might affect the impact of inspection, but that influence is obviously smaller than the impact of the inspection characteristics. Thus, a developmental school inspection is recommended to routinise and incorporate school inspection practice into regular schooling processes, since a school's internal accountability used to understand schooling processes might be more helpful with improvement in contrast with the external accountability used to judge school performance (Leslie et al., 2012). Therefore, the implications of the findings are that the inspectorates could perform more effective developmental evaluations in which more stress is put on providing school-based professional guidance rather than intense bureaucratic monitoring.

With regards to the outcomes of curriculum reform, this study has identified a significant gap between reform policies and current practices at the local level. Although innovative

strategies aiming to reduce students' learning pressure and pursue students' all-round development had previously been put forward in the Shandong province (Dello-lacovo, 2009), the findings revealed that this reform merely brought about superficial changes at the schools, such as setting optional courses and building up dynamic personal files to record students' overall progress. However, the dominant role of academic exams in student evaluation has not been changed. Moreover, students' learning workload and pressure were aggravated by newly added optional courses and extracurricular tutorial classes, which were required in addition to compulsory academic subjects and hindered students' all-round development. The findings above reflect the disconnections among the reform goals, evaluation instruments, and local needs, and thus present an inquiry regarding the necessity to continue to carry on educational reform. In fact, examination results are still the most tangible and desirable outcome to demonstrate school quality (Leslie et al., 2012). Thus, it would be wise for school inspectorates to insist on current goals to ensure student academic outcomes and to mandate no further innovations before solid empirical evidence unearthed from the local context is provided. More importantly, the school inspectorates should devote time and effort to exploring the factors underlying the school context that affect the quality of school inspection so as to continuously optimise school inspection standards, approaches, and procedures. Additionally, it is suggested that policymakers clarify the connections between policies and contexts in the classroom, school, and broader Chinese society (Walker et al., 2012). Therefore, a systematic strategy that integrates curriculum, teaching and learning tactics, and targeted evaluation instruments (Liu, 2015) could be developed to facilitate students' all-round development.

8.4 Limitations of this Study

This study has reported the contextual issues in the process of schooling and inspection within ten junior high schools in Shandong province of mainland China and participants' perceptions regarding school inspection purpose, the importance of school inspection indicators and procedures to demonstrate and improve education quality, as well as their suggestions on improvement. However, as discussed in Chapter 4 the study has some methodological and other limitations which need to be considered when interpreting the findings. This section introduces the limitations derived from this study that might influence the way that the results are explained, and how the conclusions are applied.

8.4.1 Research Validity

Overall the study is seen as exploratory and the results of the findings cannot be generalised beyond the research context, given that a non-probability sampling method and relatively small sample was employed, mainly due to the limited scope of a doctoral study. The survey sample comprised teachers from ten junior high schools of Q city in Shandong, which is the most socioeconomically advanced city in Shandong province (see Chapter 3), and therefore cannot represent the overall developmental level of Shandong province as there is vast geographical and social differences between cities. Similarly, the sampled ten schools cannot be considered representative of all the junior high schools in Shandong province, although they represent considerable variation across all ten districts administered by Q city.

With awareness of "the systematic examination of the survey content to determine whether it covers a representative sample of the domain to be measured" (Anastasi & Urbina, 1997, p. 114), the researcher comprehensively reviewed related international and Chinese literature and latest school inspection and education reform policies in the context of China. However, because of the limited time and scope of this study, only four provinces' school inspection frameworks were reviewed to inform the survey instruments. However, in order to maximise the variety of the inspection systems, the four provinces were chosen from different regions in China based on their diverse socioeconomic contexts, but it should be recognised that the inspection documents obtained from the four provinces cannot represent the overall circumstances of all of the 34 provincial inspection systems in such a vast country. Therefore, a wider range of the inspection frameworks formulated by the rest of the provincial inspectorates could be reviewed to enrich the survey instrument used in this research and enhance the content validity of the survey.

As a non-experimental research study, neither the quantitative strand nor the qualitative strand of this research provides a causal explanation of the results. It can be recognised in quantitative data analysis that within the urban/rural area where the schools are located, participants with senior/junior professional titles, and schools with different socioeconomic contexts were useful to better understand differences between different groups of participants in their perceptions of school inspection purpose, inspection indicators and procedures to demonstrate and improve education quality. However, neither the participants' personal characteristics, such as professional titles nor school's local context provides causal explanations of the differences in participant perceptions on school inspection system.

8.4.2 External Social Pressure

As stated in Chapter 4 and information provided to participants (see Appendix V), the participants' voluntarism was emphasised. However, in the process of recruiting the participants to attend the survey and individual interviews, it is possible not all of them were completely voluntary. In order to reduce the interruptive impact of investigation on teachers' working rhythm and students' learning as far as possible, the researcher was not allowed to get in touch with participants directly but through a "gatekeeper" from school who could be a school manager or a headteacher with access to school staff. In this sense, the administrative power is likely to intervene in participants' decisions regarding volunteering to complete the survey.

Moreover, in face of the social, cultural, and bureaucratic pressure, it might be difficult for participants to share their unpopular or exceptional perspectives during the survey and interviews, particularly in the Chinese centralised school system where there is an emphasis on "saving face" (Morrison, 2009). When the researcher met the interviewees, some of them regarded the researcher as a member of the senior administrative department to investigate their schools. Although the researcher had fully informed the participants regarding the research purposes and processes, they still showed their high respect for the researcher and demonstrated a somewhat cautious attitude towards the interview questions. This issue may also be reflected in the mostly quite positive and relatively low variability in survey responses, which might be due to participants not wanting to offer a negative viewpoint on school inspection. It is unclear how this issue could be better addressed, although improvement to the survey item design might be one aspect to explore in future. Nevertheless, in spite of mainly positive responses, the survey item findings were able to identify key strengths and weaknesses in different aspects of the inspection system.

8.4.3 Language issue

Given that the researcher is a native Mandarin speaker, collecting and understanding the original meaning of the data through interviews was easy and convenient for the researcher. However, after the transcribed data in Chinese was translated into English, it was sometimes difficult to preserve the original meaning of the data and clarify the focus of the participants at the same time. Additionally, the cross-cultural researcher was confronted with the challenge of building up a conceptual rather than merely strict linguistic equivalence when the substantial analysis of the interview data was performed with care and rigour. This

highlights a potential limitation in reflecting the nuances of meaning on qualitative data when the findings are presented and interpreted in English.

8.4.4 Researcher Bias

As discussed in Chapter 4, the researcher, who has been exposed to the compulsory education system in China for many years, would unavoidably retain some pre-existing perspectives about school inspection and the broader education system in China. This prejudice to some extent might affect interview instrument development and the interview process, even though the researcher has rigorously reviewed related international and local literature. However, the researcher always sought to minimise any potential bias by getting feedback on instrument development and interpretation of findings from researcher colleagues.

8.5 Future Research

Future research should be conducted by avoiding or minimising the impact brought about by the limitations discussed above. This research uncovers findings that promoting school development was much higher rated than promoting students' academic achievement by participants as the key purpose of school inspection in Shandong province. However, students' performance still plays a crucial role in evaluating school quality in practice. This research provides empirical evidence regarding the strengths and weaknesses of procedures used in school inspection which affect education quality, according to participants' perceptions. However, there was no tangible quantitative evidence obtained to examine to what degree school management and classroom teaching have been improved based on the feedback provided by the external inspectors. In other words, the impact of school inspection on improving classroom teaching and teachers' teaching practice cannot be reflected by changes in students' academic achievements. It will be significant to investigate the impact of school inspection on education quality by allowing direct measures of the changes in students' academic achievements before and after school inspection. Thus, more empirical studies on the impact of school inspection on improving students' academic performance are needed. Additionally, it is also essential to identify and empirically analyse the mechanisms which connect school inspections to school improvement actions and to further clarify the links between the characteristics of school inspection approaches and school improvement.

This research only examines participants' perceptions of the importance of school inspection indicators and the procedures in demonstrating and improving education quality. However, the scope of this research could be expanded by adding scales concerning the degree of

participants' satisfaction with the applicability and impact of each school indicator and procedure in demonstrating and improving education quality in practice. Hence, participants' perceptions on the importance of inspection indicators and procedures could be compared to the degree of the participants' satisfaction with the implementation of the indicators and procedures in the practice of school inspection with the purpose of highlighting the existing issues regarding feasibility and applicability of the specific indicators and procedure.

In order to enhance research validity, a large-scale survey could be conducted by inviting more participants from different cities of Shandong province or other provinces to respond to the survey in the future research so as to generalise the results to a more extensive area of the Shandong province. Also, the survey instrument could be improved by systematically reviewing all the existing provincial school inspection policies to obtain a more comprehensive understanding of the school inspection system in the Chinese context, which might be worthwhile to enrich and develop the school inspection framework of Shandong province. Additionally, qualitative case studies would be beneficial for getting in-depth insights into the roles of the procedures used in school inspection in generating a school's actions of improving education quality and the measures taken by the schools to improve education quality in response to the external school inspection. It is hoped that more empirical research in the Chinese context will trace clear connections between the process of school inspection and changes in schooling processes for improvement so as to optimise the school inspection system and strengthen the effects of school inspection on improving education quality. Also, piloting of research instruments could be improved in future research to seek more differentiation in survey responses and tighter meaning in interview questions.

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Appendix I Questionnaire

Survey on External Inspection Policy and Practice in Shandong Province

By responding to this survey, I have read the information sheet and consent to the information provided being used by the researcher in line with the study information sheet.

Section 1 Some Basic Information of Participants

*Required

1. What is your gender? *
   - Male
   - Female

2. What is your age? *

Your answer

3. What is your position in the school?
   - Head-teacher
   - Teacher
   - Administrative staff
   - Others:

If your are administrative staff, please specify which kinds of work are you doing

4. If you are a teacher, what is your current job title currently at this school?
   - 'Zheng' senior teacher (equivalent to professor in university)
   - Senior teachers (equivalent to reader in university)
   - First-rank teacher
   - Second-rank teacher
   - Third-rank teacher
   - Others (Please specify) : _____

5. What year groups do you teach?
   - The first year
   - The second year
   - The third year
   - Both the first year and the second year
   - Both the second year and the third year
   - Both the first year and the third year
   - All

6. What is your highest level of education? *
   - Postgraduate and above
   - University undergraduate (offering degree programs)
   - Non-university tertiary

7. How many total teaching years do you have? *

Your answer

8. How many total teaching years in your current school do you have? *

Your answer

9. Which subject are you teaching most now? *

- Chinese
- Mathematics
- English
- Chemistry
- Physics
- Biology
- History
- Geography
- Arts
- Music
- PE and Health
- ICT
- Ideology and Politics
- Society and Citizen-ship
- Other

10. School Location *

- City
- Township/county

11. School Status *

- Regular school
- Township/county model school
- City model school
- Provincial or national model school
- Other:

12. When is the last time that your school was inspected by city inspector? ___Month __Year

13. How many times has your school been inspected in the last year?

_____(Insert Numbers) Times

14. Did you play any roles in the latest school inspection by city inspector? (E.g. prepare for classroom observation; prepare for some documents for inspection. etc.)

- Teaching a class observed by inspectors
- Preparing for class that will be observed by inspectors.
- Preparing teaching material/files for school inspection.
- Talking to an inspector about teaching and learning in this school
- Talking to an inspector about non teaching and learning matters in this school
- Other

If you would be willing to participate in an interview please provide your contact details here

Section 2 Purposes of External Inspection in Schools in this Province

In your view, to which degree do you agree on the purposes listed below in relation to external provincial inspection?

Indicator	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) to improve education quality					

2) to promote school development					
3) to promote students' overall development					
4) to promote teachers' professional development					
5) to promote schools to comply with legal regulations					
6) to promote educational equity					
7) to promote school/teacher accountability					
8) to improve student outcomes					
9) to improve parental satisfaction					

Do you think there is another purpose of school inspection in Shandong Province?
If yes please provide specific details of other purpose/s

Section 3 External School Inspection Content

In your view, how important are the indicators below to demonstrate education quality in your school as a part of external provincial school inspection?

1. Compliance with Legal Regulations

Indicator	Not important at all	Not important	Important	Very important	The most important
1) Disabled children are normally accepted to learn in regular classes.					
2) Children of rural migrant workers in cities are normally accepted in compulsory education equally to urban children					
3) School annually holds sports games.					
4) Weekly physical education and sports classes are compulsory for all students.					
5) The times of running academic exams should comply with relevant laws and regulations.					
6) Academic examinations for students in secondary schools are strictly arranged to avoid cheating in exams.					
7) The school does not run any paid tutoring centre					
8) Financial management of the school strictly complies with national regulations					
9) School teachers and students regularly attend emergency evacuation exercises for safety.					
10) Students' places for food and drinking, living and learning where conditions of air, sunshine reach the requirements, to keep infectious and common diseases and food poisoning from students.					
11) Students' eyesight is regularly checked in expectation of meeting the standards of students' health.					
12) Students' health examination is checked					

annually and saved in students' health files.					

2. Organisation and Management in the School

2.1 School Leadership

Indicator	Not important at all	Not important	Important	Very important	The most important
1) The school staff shares a common set of beliefs about schooling/learning.					
2) School development plans have clear focuses and distribution of responsibilities.					
3) Head teacher provides parents or guardians with information on the school performance every term.					
4) Head teacher provides parents or guardians with information on their students' performance every term.					
5) Head teachers regularly participate in observing and evaluating teachers' work in class every term.					
6) The leaders' team group tackles the practical issues related to students' learning and teachers' teaching.					
7) Teachers are always consulted on important decisions made by the school.					
8) Families and communities are actively encouraged to support and promote student learning in collaboration with school.					

2.2 School Management

Indicator	Not important at all	Not important	Important	Very important	The most important
1) All school members are involved in school self-evaluation system.					
2) School takes measures to improve teaching and education quality based on feedback given by the inspectors.					
3) Teachers are evaluated comprehensively, not solely based on students' academic achievements and the rates of admission to high schools.					
4) Formative assessment results are used as evidence to evaluate students.					
5) School builds up comprehensive and dynamic individual records on each student to record their overall progress.					
6) The school provides students' mental health education and services					
7) Teaching resources are assigned fairly and efficiently across different curriculum areas.					
8) The internet teaching resources system in school is adequate					

2.3 School Environment

Indicator	Not important at all	Not important	Important	Very important	The most important
1) Create positive learning atmosphere through various cultural events.					

2) School layout is fit for purpose.					
3) School environment is adequate in terms of attractiveness and cleanliness.					
4) No in-school violent incidence is allowed to incur to school students.					
5) The environment is inclusive for all without discrimination on the grounds of any grouping or status such as race, colour, sex, ethnicity, age, language, religion, disability, property, or birth.					

3. Teaching and Learning

3.1 Classroom Teaching

Indicator	Not important at all	Not important	Important	Very important	The most important
1) School makes full use of traditional festivals and critic historical events to educate students about civic morality.					
2) Moral education is attempting to address students' practical issues related to students' self-activation and mental health.					
3) Teachers make plans with clear teaching goals and address difficulties of delivering the content to achieve effective classroom teaching.					
4) Teachers refer to a problem from everyday life or work to demonstrate why new knowledge is useful.					
5) Formal Chinese handwriting and mandarin should be used in classroom teaching.					
6) Teachers continuously reflect on the effects and teaching goals that have been realized in teaching process					
7) Teachers play a leading role in taking advantage of educational resource to optimize teaching design in the classroom.					
8) Teachers take measures to help poor students improve academic achievements					
9) Teachers believe that all students can learn.					
10) Teachers motivate students' learning interests					
11) Explorative and practical homework is advocated to be assigned to students.					
12) Students act as a main part in classroom teaching using active, standard-based participation methods.					
13) Students' emotion and voice are paid attention during classroom teaching, which offers continuous support for student-centred learning.					
14) Interactive and democrat classroom teaching model is constructed.					
15) All students are treated equally					
16) Personal tutoring is applied to students who have special needs.					
17) Students' skills of independent thinking, creation and practice are developed.					
18) Students conduct self-evaluation to help change and improve classroom teaching based on evaluation results.					
19) Students are able to conduct autonomous,					

cooperative and explorative learning activities by using information technology.					

3.2 Teachers' Professional Development

Indicator	Not important at all	Not important	Important	Very important	The most important
1) Teacher concerns, loves and respects students.					
2) Teachers' morality is regarded as critical evidence for recruitment and evaluation of teachers.					
3) Teachers are required to publish papers in assigned journals.					
4) Teachers' abilities to develop and implement school-based curriculum have been increased continuously.					
5) Teachers regularly collaborate with other teachers to attend preparation for class altogether in an educational research group.					
6) School staff regularly has an open discussion about pupils' learning difficulties.					
7) Teachers regularly observe each other in the classroom and give each other feedback					
8) Teachers are encouraged to get involved in activities of educational research and academic communication to express opinions.					
9) Model teachers play leading roles in professional development.					
10) Model classes and teaching competitions improve teachers learning and professional abilities.					
11) The master of basic educational theories and curriculum standards help teachers build up connections between their major taught subjects with other subjects.					
12) Teachers' working conditions are adequate.					
13) The structure of teachers' team is reasonable in relation to teachers' age and subjects.					

3.3 Students' Learning

1) Students' career education is regularly and adequately conducted.					
2) The system of optional courses in school is carried on in practice.					
3) School makes full use of curriculum resource in and out school to develop distinctive school-based curriculum system to satisfy students' overall development and different characteristics.					
4) Thinking and reasoning processes are more important than specific curriculum content.					
5) Students regularly attend various art and cultural activities in school.					
6) Students regularly attend various practical activities in community and practice base organised by the school, such as labour service and technical					

training to develop students' labour techniques.					
7) Pupil success is termly celebrated in this school.					
8) Teachers take account of students' early previous psychological development experience in teaching process.					
9) Teachers consider the impacts of students' early previous development in skills and conditions on learning to choose teaching strategies.					

4. Outcomes

Indicator	Not important at all	Not important	Important	Very important	The most important
1) Students have good learning habits and methods.					
2) Learners are enthusiastic about learning.					
3) Learners enjoy learning.					
4) Learners enjoy being at school.					
5) Students feel safe at school.					
6) Students are able to use existing knowledge to frame, analyse and solve problems.					
7) Learners are able to think critically to express their views, thoughts, and ideas.					
8) Students have developed right value and attitudes, such as having good manners, being diligent and thrifty, protecting the environment, etc.					
9) Learners have sense of self-discipline					
10) Learners have abilities to control emotion.					
11) Learners are optimistic to overcome difficulties and frustration.					
12) Most students are able to communicate and collaborate with others in teamwork.					
13) Students develop a good relationship with their classmates and teachers.					
14) Students can respect, concern and help others.					
15) Students have knowledge and skills to develop healthy living habits.					
16) Each student masters some kinds of physical sports techniques.					
17) Parents are satisfied with school education quality.					
18) Students are satisfied with school education quality.					
19) Value added evaluations of students' academic development have increased.					
20) Students' overall well-being is satisfactory.					
21) The proportions of students who are admitted to higher school are satisfactory.					

Section 4 External School Inspection Procedures

1. To what extent do you think the following procedures of external city school inspection contribute to high quality in education in your school?

Procedure	Not important at all	Not important	Important	Very important	The most important
1) Parent satisfaction surveys.					
2) Pupils' satisfaction surveys.					
3) Targets set by the school					
4) Use of externally set performance indicators					
5) Publication of school performance data					
6) Comparison of performance with schools of similar socioeconomic characteristics					
7) Class observation by external inspectors					
8) Written Feedback provided by external inspectors					
9) Verbal Feedback provided by external inspectors					
10) How frequently that the schools are visited each term					
11) School self-evaluation report					
12) Rewards and sanctions received from the inspectors					

2. What are your views about the performance indicators and targets currently defined by the external city inspectorates?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) Current performance indicators are appropriate for evaluating the quality of education					
2) Setting targets leads to school improvement					
3) School targets give an accurate indication of the school's efforts to improve performance					
4) Target setting is not an important issue for schools					
5) A focus on quantifiable targets distorts the purposes of education					

Section 5 Impacts of External School Inspection

1. What are your views about impacts of external city school inspection on improving education quality?

Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) School Inspection is necessary to monitor the range and extent of education quality					
2) School inspection improves the quality of classroom teaching					
3) school inspection results in this schools fabricating documents used for school inspection in order to reach inspection standards					
4) During inspection visits, teachers in your school are prepared and better structure their lectures to reach process standards.					
5) School inspection requires teachers and head teachers to spend too much time in preparation for school visit, and is distracted from teaching and learning.					

2. Evaluating the quality and evidence from internal evaluation processes is a significant part of external city inspection procedure, what are your views about internal evaluation processes of education quality in your school?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) Internal self-evaluation by schools can be used to address some real problems, such as bullying or social exclusion of pupils					
2) In general, internal self-evaluation is beneficial for improving teaching					
3) There is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school.					
4) School self-evaluation is just a bureaucratic exercise					
5) Internal self-evaluation is beneficial for improving students experience					
6) Internal self-evaluation is beneficial for improving students' academic outcomes					
7) Internal self-evaluation is beneficial for improving overall performance of school					

3. What are your views about impacts of feedback given by external city inspectors after school visit on improving education quality? Please think about the inspection visit you had during the previous academic year.

Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) The feedback provided to the teacher during the last inspection visit was insightful to improve classroom teaching					
2) The inspectorate identified additional strengths that the school had not identified					
3) The Inspectorate identified additional weaknesses that the school had not identified					
4) The school in the main will act on the feedback received from the inspectors					
5) Inspections generated useful feedback for me to improve my teaching practice.					

4. What are your views about impacts of external city school inspection on your own well-being?

Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) I feel pressure to improve my teaching as a result of the last inspection visit					
2) In my experience, inspections generate significant additional workload for me personally					
3) In my experience, inspections generate additional pressure and stress for me personally					
4) I feel pressure for my school overall to do well on the inspection standards					
5) When my school is inspected every term, I					

feel additional pressure.					
6) When my school is inspected every term, my workload is generated to prepare for inspection.					

5. In your school, what are your views about impacts of city inspection standards on areas shown as below?

Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) Improvement of the evaluation and supervision of teachers					
2) Improvement of self-evaluation processes of the school					
3) Teachers in my school are discouraged from experimenting with new teaching methods that do not fit the scoring rubric of the Inspectorate.					
4) School inspection standards have resulted in narrowing curriculum and instruction strategies in my school					
5) School inspection standards have resulted in refocusing curriculum and teaching and learning strategies in my school					
6) The preparation for the inspection visit led to improvement changes in the teaching and learning in my school					
7) The preparation for the inspection visit led to improvement in leadership, management, organisation in my school					

6. What are your views about impacts of external city inspection rewards or sanctions received from the city inspectorate?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1) If the school where you are working in was rewarded by Inspectorate, are you more likely to be encouraged to work harder.					
2) If the school where you are working in got sanctions from Inspectorate, are you more likely to actively focus on resolving problems that Inspectorate pointed out.					

7. Please write below any comments you have about the strengths or weaknesses of any aspect of the current external provincial inspection system in Shandong Province (please explain fully why, how, what)

Strengths	
Weaknesses	

8. Please write below any advices about how to improve the provincial inspection system?

Appendix II: Literature Source of Survey Items

Purpose of School Inspection	Source
1. to improve education quality	I
2. to promote school development	P/S/N
3. to promote students' overall development	P
4. to promote teachers' professional development	S/N
5. to promote schools to comply with legal regulations	P
6. to promote educational equity	P/I
7. to promote school/teacher accountability	P
8. to improve student outcomes	N
9. to improve parental satisfaction	I
Compliance with Legal Regulations	
1. Students' places for food and drinking, living and learning where conditions of air, sunshine reach the requirements, to keep infectious and common diseases and food poisoning from students	S
2. School teachers and students regularly attend emergency evacuation exercises for safety	S
3. Students' health examination is checked annually and saved in students' health files.	P
4. Academic examinations for students in secondary schools are strictly arranged to avoid cheating in exams.	S
5. Students' eyesight is regularly checked in expectation of meeting the standards of students' health.	S
6. Financial management of the school strictly complies with national regulations.	S
7. The school does not run any paid tutoring centre	P
8. School annually holds sports games.	P
9. The times of running academic exams should comply with relevant laws and regulations	S
10. Children of rural migrant workers in cities are normally accepted in compulsory education equally to urban children	P
Organization and Management in the School	
School Leadership	
1. The leaders' team group adequately tackles the practical issues related to students' learning and teachers' teaching	P
2. Teachers are always consulted on important decisions made by the school	P
3. School development plans have clear focuses and distribution of responsibilities.	I/Q
4. Families and communities are actively encouraged to support and promote student learning in collaboration with school.	S
5. The school staff shares a common set of beliefs about schooling/learning.	I
6. Headteacher provides parents or guardians with information on their students' performance regularly every term	I
7. Headteachers regularly participate in observing and evaluating teachers' work in class every term.	I
8. Headteacher provides parents or guardians with information on the school performance regularly every term	I
School Management	
1. Teachers are evaluated comprehensively, not solely based on students' academic achievements and the rates of admission to high schools	S
2. Formative assessment results are used as evidence to evaluate students.	S
3. The school provides students' mental health education and services	S
4. Teaching resources are assigned fairly and efficiently across different curriculum areas.	S
5. School builds up comprehensive and dynamic individual records on each student to record their overall progress.	S
6. The internet teaching resources system in school is adequate	Q
7. School takes measures to improve teaching and education quality based on feedback given by the inspectors.	S
8. All school members are involved in school self-evaluation system.	S
School Environment	
1. No in-school violent incidence is allowed to incur to school students	I
2. The environment is inclusive for all without discrimination on the grounds of any grouping or status such as gender, ethnicity, age, language, religion, or disability.	I
3. The school creates a positive learning atmosphere through various cultural events	S

4.	School layout is fit for purpose.	P
5.	School environment is adequate in terms of attractiveness and cleanliness.	P
	Teaching and Learning	
	Classroom Teaching	
1.	All students are treated equally	P
2.	Students act as the main part of classroom teaching where active, standard-based participation methods are employed	I/P
3.	Students' skills of independent thinking, creation and practice are developed.	P
4.	Teachers make plans with clear teaching goals and address difficulties of delivering the content to achieve effective classroom teaching	S
5.	Teachers continuously reflect on the effects and teaching goals that have been realized in teaching process	P
6.	Students' emotion and voice are paid attention during classroom teaching, which offers continuous support for student-centred learning.	I/P
7.	Interactive and democrat classroom teaching model is constructed.	P
8.	Teachers play a leading role in taking advantage of educational resource to optimize teaching design in the classroom.	I/P
9.	Teachers take measures to help poor students improve academic achievements	I/P
10.	Moral education is attempting to address students' practical issues related to students' self-activation and mental health.	N
11.	Teachers refer to a problem from everyday life or work to demonstrate why new knowledge is useful.	I
12.	Teachers motivate students' learning interests	I
13.	Formal Chinese handwriting, and mandarin should be used in classroom teaching.	P
14.	Personal tutoring is applied to students who have special needs.	P/I
15.	School makes full use of traditional festivals and critic historical events to educate students about civic morality.	S
16.	Students are able to conduct autonomous, cooperative and explorative learning activities by using information technology.	S/Q
17.	Explorative and practical homework is advocated to be assigned to students.	S
18.	Students conduct self-evaluation to help change and improve classroom teaching based on evaluation results.	Q
19.	Teachers believe that all students can learn	I/P
	Teachers' Professional Development	
1.	Teacher concerns, loves and respects students	N
2.	Teachers' morality is regarded as critical evidence for recruitment and evaluation of teachers	P
3.	Teachers' working conditions are adequate.	I
4.	The structure of teachers' team is reasonable in relation to teachers' age and subjects.	P
5.	School staff regularly has an open discussion about pupils' learning difficulties.	I
6.	Teachers regularly collaborate with other teachers to attend preparation for class altogether in an educational research group.	I
7.	Model teachers play leading roles in professional development.	Q
8.	The master of basic educational theories and curriculum standards help teachers build up connections between their major taught subjects with other subjects.	Q
9.	Teachers regularly observe each other in the classroom and give each other feedback	I
10.	Teachers are encouraged to get involved in activities of educational research and academic communication to express opinions.	S
11.	Model classes and teaching competitions improve teachers learning and professional abilities.	Q
12.	Teachers' abilities to develop and implement school-based curriculum have been increased continuously.	S
13.	Teachers are required to publish papers in assigned journals	P
	Students' Learning	
1.	Thinking and reasoning processes are more important than specific curriculum content	I
2.	Pupil success is celebrated in this school every term	I
3.	Students regularly attend various art and cultural activities in school.	P
4.	Students regularly attend various practical activities in community and practice base organised by the school, such as labour service and technical training to develop students' labour techniques.	S
5.	School makes full use of curriculum resource in and out school to develop distinctive school-based curriculum system to satisfy students' overall development and different characteristics.	Q
6.	The system of optional courses in school is carried on in practice	Q
7.	Students' career education is regularly and adequately conducted	Q
	Outcome	
1.	Students feel safe at school	I
2.	Learners are enthusiastic about learning	I

3. Students have good learning habits and methods.	P
4. Learners have developed right moral values and attitude, such as having good manners, being diligent and thrifty, protecting the environment, etc.	P
5. Learners enjoy learning.	I
6. Learners are able to think critically to express their views, thoughts, and ideas.	P/I
7. Learners have abilities to control emotion.	Q
8. Learners are optimistic to overcome difficulties and frustration.	Q
9. Most students are able to communicate and collaborate with others in teamwork.	Q
10. Learners have sense of self-discipline	P
11. Students develop a good relationship with their classmates and teachers	Q
12. Students can respect, concern and help others.	P
13. Learners enjoy being at school.	I
14. Students are able to use existing knowledge to frame, analyse and solve problems.	P
15. Students have knowledge and skills to develop healthy living habits.	Q
16. Students are satisfied with school education quality.	Q
17. Each student masters some kinds of physical sports techniques.	P
18. Parents are satisfied with school education quality.	Q
19. Students' overall well-being is satisfactory.	I
20. Value added evaluations of students' academic development have increased.	Q
21. The proportions of students who are admitted to higher school are satisfactory	P
External School Inspection Procedure	I/N/S
Impacts of External School Inspection	I

Note: **I= International literature**

Source: UNICEF. (2000). *Defining Quality in Education.* Paper presented at the The International Working Group in Education, Florence, Italy.
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P= other four provinces

Source: Jilin, E. I. O. (2012). *Inspection Indicators System of Education Quality for Primary and Secondary School in Jilin*. Jilin: Educational Inspection Office of Jilin Retrieved from http://cckcjy.com/dddt/5417.shtml

Jiangsu, E. I. O. (2012). *Inspection Indicators System of Education Quality for Primary and Secondary School in Jiangsu*. Jiangsu: Educational Inspection Office of Jiangsu Retrieved from http://www.ec.js.edu.cn/art/2012/6/11/art_10339_137072.html
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Shannxi, E. I. O. (2012). *Inspection Indicators System of Education Quality for Primary and Secondary School in Shannxi*. Shannxi: Educational Inspection Office of Shannxi Retrieved from http://www.snedu.gov.cn/news/qitawenjian/201303/25/6187.html

N=national inspection framework

Source: MOE. (2011). Supervisory Evaluation Indicators System of Quality Education of Primary and Secondary Schools of China. Retrieved from http://www.tledu.cn/cms/downfile/0a46ee07-9670-4f59-89e9-ce30dc583fbb.
MOE. (2011). Methods of inspection and evaluation of quality education in primary and secondary schools. Retrieved from http://www.whedu21.com/zhenwugongkai/ShowArticle.asp?ArticleID=37449

S= Shandong province school inspection framework

Shandong Province, E. D. (2013). *School Inspection Evaluation Measures of Quality Education for Ordinary Primary and Middle School*. Shandong Education Department of Shandong Province Retrieved from http://www.sdedu.gov.cn/sdjy/_xxgk/_xxgkml/_zcfg/732674/index.html

Q= third-party school inspection framework

Source: Q City, Q. E. B. (2015). *Developmental Evaluation Indicator System of School Quality of Primary and Secondary School* Qingdao: Q City Educational Inspectorates Office Retrieved from http://www.qdsn.gov.cn/n16/n1175/n9964611/n9964666/n9964668/n9965821/171012102119210336.html

Appendix III Interview Guideline

Section 1: Purpose of School Inspection

1. What is the purpose of inspection in Shandong province?
2. Do you think school inspection is helpful to improve education quality? If yes how can it improve education quality? If not, why this happens?
3. Is it for accountability? Or improvement? Or Equity? Or other purposes?

Section 2: Inspection Criteria of Education Quality

1. Do you think the quality of compulsory education should cover which aspects? Why?
2. Do you think current inspection standards of Shandong province cover every aspect of education quality? If not, which other aspects should be added to it?
3. Which aspect of education quality in Shandong province is satisfactory? Why? Did you feel pressure for your school overall to do well on the inspection standards? Why? Which aspect of education quality should be strengthened? Why? How can it be enhanced/improved?
4. Which inspection standard do you think is the most important to demonstrate education quality? Why?
5. Do you think target setting is helpful for school improvement?
6. Do you think students are still facing high pressure of learning? Do you think students' academic achievement is still the main criteria to demonstrate education quality in your school? Why or why not?
7. Do you think the indicator for enriching curriculum content, such as setting optional course is important to demonstrate education quality in the school? Why or why not?
8. Which aspects do you think are important to evaluate teacher quality? Why?
9. Do you think current school inspection system is concerning about student overall development? Why?
10. How do you think about the roles of school inspection system in supporting curriculum reform recently? Can you give me some examples?

Section 3: Education Inspection Procedures

1. What preparatory work did you do before the Inspectorates visit school? Was this useful to demonstrate educational quality in your school? Or to get a high score in school inspection?
2. What specific procedures are included in inspection visits? Among those procedures, which procedures do you think are useful to demonstrate education quality? Why? Which procedures are not useful? Can you give examples? Do you think parents should also be involved in school inspection? Why?
3. Do you think it is necessary to conduct self-evaluation for schools? Why?
4. Did a follow-up inspection visit happen to your school to recheck if your school have improved according to the feedback from the Inspectorate and reached the required standards? Can you give examples?
5. Which positive and negative impacts did school inspection bring to your working and teaching practice and your well-being? Why? Can you give examples? Were teachers in your school discouraged from experimenting with new teaching methods that do not fit

the scoring rubric of the Inspectorate? Why?

6. In your opinion, is it necessary for teachers and headteachers to spend too much time in preparation for the school visit? Are they distracted from teaching and learning because of inspection?
7. When inspection has been ended did you receive any feedback from the Inspectorate about your classroom teaching? Did they provide clear and useful recommendations to improve classroom teaching? Were they practical? If not, how did they look like? If yes, can you give examples? During the period of school inspection did the inspectorate identify additional strengths that the school had not identified? How? Would schools take measures to improve teaching and education quality based on feedback given by the inspectors?
8. Has the school where you are working in received any rewards or sanctions? If the school received sanctions, how the sanctions influence your working or well-beings? What were you demanded doing to make up for the sanctions? If the school received rewards, were you rewarded as well? What do you think about the influences of rewards on your working? Can you give examples?
9. How often did your school be inspected in one academic year? Do you think this frequency is reasonable? Why? If not, which impacts do you think it brought to you? How frequently the school is inspected do you think is appropriate?
10. How could the inspection system be improved? Can you give examples?

访谈提纲

一、教育督导评价的目的

1. 您认为我国教育督导评价的主要目的是什么？您认为教育督导能够提高教育质量吗？如果能是怎样提高的？如果不能，是为什么？
2. 您认为教育督导的主要目的是学校改进还是问责？为什么？教育督导还有别的目的吗？
3. 您认为促进教育公平是教育督导评估的目的的主要目的之一吗？为什么？

二、 教育督导评价标准内容

1. 您认为义务教育阶段的教育质量应该包含哪些方面的内容？
2. 您认为我国教育督导评价标准有哪些优点？您认为我国目前实行的教育督导评价标准已经涵盖了教育质量的各个方面了吗？如果没有，还有哪些方面可以补充？
3. 您认为我国教育质量的哪些方面比较令人满意？为什么？哪些方面应该加强，为什么？怎样改善？
4. 您认为我省哪些教育督导评估指标对于体现教育质量最为重要？
5. 您认为学校绩效目标的设定是否有助于学校教育质量的提高？为什么？
6. 在学生学习方面，您认为目前我国中小学生的学习压力大吗？这些压力来自于哪些方面？您认为升学考试成绩目前是否依然是评价我国中小学生教育质量的主要指标？为什么？
7. 您认为学校有必要给学生设置选修课吗？有助于学生发展吗？为什么？
8. 您认为我们应该从哪些方面来评价教师？您认为哪些方面是比较重要的？
9. 您认为我国目前的督导评价体系是否关注学生的全面发展？主要体现在哪些方面？
10. 您认为我国的教育督导体系是怎样支持或者促进我国近十年来的中小学教育改革的？请您举例说明。

三、 教育督导评价过程

1. 您认为学校督导检查都包括哪些程序？在这些程序中您认为哪些是有助于提高教育质量的？为什么？哪些没有用处？您能举例说明吗？
2. 您认为学校自评对提高教育质量有帮助吗？为什么？
3. 您认为各省市教育督导部门每年应该向社会公布各个学校的绩效数据吗？您认为公布学校绩效数据能有效提升学校的整体绩效吗？为什么？
4. 您认为家长和学生有必要参与学校督导评价吗？为什么？
5. 您认为督学推门听课能在一定程度上提高教学质量吗？为什么？
6. 根据您的经验，督导检查结束后，您是否会针对您观察的课堂教学情况给出反馈意见？您认为这些反馈意见有哪些优点和缺点？您认为督学为学校提供的书面反馈意见跟口头反馈意见相比哪一项更能有效促进教学质量？督学们能额外指出学校没有发现的优缺点吗？

7. 根据您的经验，在督导检查过后，督学们会要求学校根据反馈意见进行改进吗？还会有后续的督导检查来了解学校的改进情况并检验学校的有关方面是否达标吗？

8. 您认为教育督导会给中小学校带来哪些积极的或者消极的影响？请举例说明？

9. 目前我国教育督导评价体系是否会奖励达标的学校？如果奖励，怎样奖励？您认为应该奖励吗？是否会惩罚未达标的学校？如果惩罚，怎样惩罚？如果不惩罚，您认为应该惩罚吗？为什么？

10. 据您所知，我国或者您所在的区域中小学校一年大约接受多少次督导检查？您认为督学检查的这种频率合理吗？您认为每学年多少次的督导检查是合理的？为什么？

11. 您认为我国目前的督导评估体系有哪些优点和缺点？

12. 您对改进我国现有的督导评估体系有哪些建议呢？

Appendix IV Education Business Fees per Student on Average in China in 2017

Provinces and Direct-controlled Municipalities	Primary School	Secondary School	Levels
Beijing	30016.78	57636.12	Higher level
Tianjin	18683.78	30949.79	
Hebei	7914.19	11441.39	
Shanxi	10151.83	13523.76	
Inner Mongolia	13110.02	16380.17	
Liaoning	10218.47	14564.35	
Jilin	13846.91	17746.68	
Heilongjiang	14383.58	15920.79	
Shanghai	20676.54	30573.39	
Jiangsu	13081.57	22364.58	
Zhejiang	13937.07	20564.12	Middle Level
Anhui	9035.59	13239.49	
Fujian	10110.59	16100.38	
Jiangxi	8500.64	11346.21	
Shandong	9151.57	15227.84	
Henan	5759.21	8997.60	
Hubei	11030.98	18635.99	
Hunan	8378.07	12574.64	
Guangdong	11267.58	16084.37	
Guangxi	7897.88	10028.82	
Hainan	11296.31	14982.87	
Chongqing	10533.21	14692.02	Lower Level
Sichuan	9620.83	13394.03	
Guizhou	9753.05	11273.06	
Yunnan	10491.47	12730.79	
Tibet	26246.80	27341.64	
Shannxi	11016.89	15163.88	
Gansu	10776.09	12551.12	
Qinghai	13191.54	16910.88	
Ningxia	9503.42	12920.35	
Xinjiang	11738.70	17949.09	

Data Source: MOE, T. M. o. E., & State Satisitc Bureau, S. (2018). Per Student Education Business Fees on Average in 2017. Beijing: The Ministry of Education & State Statistics Bureau Retrieved from http://www.moe.gov.cn/srcsite/A05/s3040/201810/t20181012_351301.html

Appendix V Information Letter

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University of Bristol
35 Berkeley Square
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Tel: +44 (0) 117 33 14108
www.bristol.ac.uk/education

Hong Zheng
Email: hz14130@bristol.ac.uk

Information Letter for Survey Research

12 December 2016

Dear Department Director:

We are surveying the secondary schools in Qingdao including schools in urban area and rural area, to explore current policies, practices and the perceptions of stakeholders to identify which factors can contribute to improving the current provincial school inspection criteria and practice in China.

We would greatly appreciate if you could complete the brief questionnaire that is administered through online platform. We would like to send you the questionnaire by email with a link that you can access the questionnaire. It requires teachers, head-teachers and administrative staff to attend this questionnaire survey. We expect that it should take approximately 20 minutes for you to complete. There are no known or anticipated risks from participating in this study.

Please submit this survey in the online platform**.** By completing and submitting the survey you are giving consent for your response to be included in the study. All information that you provide will remain confidential and will be de-identified for all analyses. If you have any questions about this survey feel free to contact me by telephone [redacted] or email hz14130@bristol.ac.uk. Results from this study will provide schools and inspectorates with different focuses and strategies that they can use to enhance education quality or improve inspection practice. Thank you for your participation.

Sincerely,

[redacted]

Hong Zheng
Graduate School of Education
University of Bristol
PhD Student

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Hong Zheng
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12 December 2016

Information Letter for Interview Research

Dear Participant:

This letter is an invitation to consider participating in a study I am conducting as part of my Doctoral degree in the Graduate School of Education at the University of Bristol under the supervision of Faculty of Social Science and Law. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

Improving compulsory education quality has become the main focus of educational reforms today in China. The absence of national evaluation standards of education quality makes it difficult to promote balanced development of education quality across different regions and to reduce the gap of education quality between rich area and impoverished areas of China, due to regional socio-economic differences. The concepts of education quality in this research was expanded from one-sided focus on academic achievement to focus on students' overall development in accordance with main trends of education quality theory development. The purpose of this study, therefore, is to explore current policies, practices and the perceptions of stakeholders to identify which factors can contribute to improving the current provincial school inspection criteria and practice in China.

This research is to reveal the practical issues in the school inspection system. As a teacher or a head-teacher or an inspector, you own rich working experience in terms of classroom teaching or school management, or school inspection. With the better understanding of educational quality, so you are likely to be more capable of identifying which factors could influence compulsory education quality. Additionally, you have been exposed to compulsory educational innovation in China for a long time, thus, you possess in-depth cognition that how school inspection were carried on and whether the standards and procedures have yielded positive effects on improving education quality or not. Therefore, I would like to include you as one of 10 participants to be involved in my study. I believe that because you are actively involved in the management and operation of your school, you are best suited to speak to the various issues, such as, educational quality, school inspection, and its impacts on school education etc.

Participation in this study is voluntary. It will involve an interview of approximately half an hour in length to take place in a mutually agreed upon location. You may decline to answer any of the interview questions if you so wish. Furthermore, you may decide to withdraw from this study at any time without any negative consequences by advising the researcher. With your permission, the interview will be recorded with voice-recorder to facilitate collection of information, and later transcribed for analysis. Shortly after the interview has been completed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of our conversation and to add or clarify any points that you wish. All information you provide is considered completely confidential. Your name will not appear in any thesis or report resulting from this study, however, with your

permission anonymous quotations may be used. Data collected during this study will be retained for one year in my locked computer. Only I will have access. There are no known or anticipated risks to you as a participant in this study.

If you have any questions regarding this study or would like additional information to assist you in reaching a decision about participation, please contact me at [redacted] or by e-mail at hz14130@bristol.ac.uk. You can also contact my supervisor, Graduate School of Education at +44 (0) 117 3314382 or e-mail at S.Thomas@bristol.ac.uk.

I would like to assure you that this study has been reviewed and received ethics clearance through the Graduate School of Education Ethics Committee at University of Bristol**.** However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please contact the GSoEEC via Wan Ching Yee, Research Ethics Co-coordinator (Tel: +44 (0) 117 331 4305 email: wan.yee@bristol.ac.uk)**.**

I hope that the results of my study will be of benefit to those organizations directly involved in the study, other voluntary recreation organizations not directly involved in the study, as well as to the broader research community.

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Sincerely,

[redacted]

Hong Zheng
Graduate School of Education
University of Bristol
PhD Student

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Information Letter for Survey Research

尊敬的各位领导，专家，督学， 老师：

您好！本次调查想了解您对有关“山东省义务教育学校教育质量评价体系”的一些教育问题的看法，旨在改进我省现行的教育督导评价标准及督导过程。 因此， 您的参与非常重要。我们非常感谢您参与此次在线问卷调查。我们将通过邮件向您发送参与问卷调查的链接，完成问卷大约需要 20 分钟。我们郑重承诺：会对您的回答严格保密。除研究人员外，其它任何人都不会接触到您的问卷，请放心填写。

请您通过网络平台提交问卷答案。如果您有任何关于此次问卷调查的任何问题，请随时联系我。我的联系方式：Tel: [redacted] 或者 邮箱 hz14130@bristol.ac.uk. 此次问卷调查结果将为您提供不同的视角和策略从而希望能够更好地提升教育质量并改进督导实践工作。

英国布里斯托大学教育研究生院

博士研究生 郑弘

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邀请函

尊敬的各位领导、督学、专家、老师:

您好!

这封信旨在邀请您参与我的博士研究项目， 该项目将由我本人在英国布里斯托大学教育研究生院完成，并得到社会科学和法律学部的监督与支持。如果您决定参与此次访谈，希望您能尽可能多的提供相关信息，使该项目能够顺利进行。

提高我国义务教育阶段学校的教育质量已经成为我国当前教育改革面临的重要议题。国家教育质量评价标准的缺失和不完善将对促进教育质量在区域间平衡发展，以及缩小经济发达地区与落后地区教育质量差距造成阻碍。本研究中的教育质量的概念从关注学生学业成绩的单一方面扩展到学生全面发展的多元化方向，并且将影响学生发展质量的学校层面，课堂层面和法律层面的因素纳入研究的范围，旨在从学校教育过程的各个环节入手以全面提高义务教育阶段学校的教育质量。同时，作为中小学教育质量评估的重要利器，教育督导评估在保障教育质量方面的作用也不容忽视。确保教育督导在检查学校教育质量的实际操作过程中的有效性，将在保证教育督导评价质量的前提下，督促各个学校不断改进自身，提高教育质量。因此，本研究旨在挖掘现行教育督导政策和实践中存在的主要问题，并结合各位专家和老师提供的专业信息，从而确认哪些因素能够促进我省和我国学校督导评价标准与实践的完善，并提供切实可行的参考建议。

该研究针对学校教育督导体系存在的实际问题，作为校长，督学和教师的您拥有丰富的学校管理，学校督导评估和课堂教学的实践经验，对教育质量有着更为深刻的了解，所以您是参与访谈调查的最合适的人选。另外，您长期以来经历了我国推行的一系列教育改革，您对教育督导是如何发展的，以及哪些评估指标和措施将对提高教育质量有着积极的意义有着更为深刻的认识，因此我非常期望能够聆听到您的真知灼见，为改善我国的教育质量和教育评价尽一份力。

接受本次访谈调查的人员本着自愿的原则参与，访谈可以约在研究者和参与者双方都同意的地方，访谈时间大约为半小时。您有权利拒绝回答访谈中的任何问题，如果您不愿回答。您可以告知研究人员随时退出本研究，不会产生任何不良后果。在您的允许下，研究者将会使用录音设备对该访谈内容进行录音，并在访谈结束后进行转录用于数据分析。访谈结束稍候，

我会将录音转述内容发送给请您对我们的对话的准确性进行确认，对于其中不清楚的地方，您还可以进行补充说明。您所提供的所有信息都是对外保密的，您的姓名不会出现在于该研究相关的任何论文与报告中。但是，在您同意的前提下，我将匿名引用您所提供的信息。该项目所收集到的所有数据信息都将被保存在经过加密的电脑硬盘中，只有我可以使用。该项目对您不存在任何未知的和潜在的风险。

如果您对该项目有任何问题或者您还需要我提供哪些额外的信息，以便帮助您决定是否参与此次访谈，请您通过以下方式联系我。我的邮箱地址 hz14130@bristol.ac.uk, 我的手机号码为 [redacted]。您也可以通过以下方式联系我在英国布里斯托大学教育研究生院的导师萨丽·托马斯教授，邮箱地址 S.Thomas@bristol.ac.uk，办公电话 +44 (0) 117 3314382。

我可以向您保证，该研究已经通过了布里斯托大学教育研究生院学术伦理委员会的审核并收到了该项目符合所有学术伦理规范的声明。当然，是否参与访谈调查最终还是取决于您，如果您对该研究的其他意见或者疑问可能会影响到您是否参与本次访谈，请您联系 GSOE 学术伦理委员会的联系人 Wan Ching Yee (Tel: +44 (0) 117 331 4305 email: wan.yee@bristol.ac.uk)。

我希望我的这项研究能够对那些直接参与其中的参与者以及相关学术团体有所裨益。我非常殷切地期待与您的对话，在这里先对您为该项目提供的协助表示真挚的感谢。

英国布里斯托大学教育研究生院

博士研究生 郑弘

Appendix VI GSoE RESEARCH ETHICS FORM

Name(s): Hong Zheng

Proposed research project: Exploring Evaluation Standards of Compulsory Education Quality in China

Proposed funder(s): N/A

Discussant for the ethics meeting: Abiodun Oyewole

Name of supervisor: Prof. Sally Thomas

Has your supervisor seen this submitted draft of your ethics application? Y/N

Please include an outline of the project or append a short (1 page) summary:

The aim of this planned PhD research is to explore current policies, practices and the perceptions of stakeholders to identify which factors can contribute to improving the current provincial school inspection criteria and practice in China. Improving compulsory education quality has become the main focus of educational reforms today in China. The absence of national evaluation standards of education quality makes it difficult to promote balanced development of education quality across different regions and to reduce the gap of education quality between rich area and impoverished areas of China, due to regional socio-economic differences. The concepts of education quality in this research was expanded from one-sided focus on academic achievement to focus on students' overall development in accordance with main trends of education quality theory development.

Mixed methods will be employed by combining quantitative and qualitative research methods. First, theories of education quality, educational effectiveness and educational inspection, as well as current national and provincial documents of inspection criteria of educational quality from 5 representative Provinces in China will be reviewed to develop the theoretical framework and research design of the study and to inform the initial themes of the qualitative data analysis in context of China. Second, according to findings drawn from literature review of international theories and inspection documents in context of China (RQ1), a survey instrument will be developed and administered to possible 500 participants including teachers, head teachers, inspectors and school managers in one Chinese Province, which is along with interviewing 10 participants. The survey will collect data with regards to which factors can be identified that might improve evaluation of school and educational quality in China. Fourth, statistical analysis of descriptive analysis and qualitative content analysis will also be conducted in order to identify which factors stakeholders consider as most significant to contribute to education quality in China. Finally, findings of this study will be employed to provide recommendations to improve school inspection and educational quality in China.

Ethical issues discussed and decisions taken (see list of prompts overleaf):

1. **Researcher access/exit**

The questionnaire survey would be conducted online through network platform based on Educational Administrative Bureau of Qingdao which, holds the email addresses of all head teachers, teachers, administrative staff and inspectors. Thus, this network platform makes it easier to interact with all schools by sharing latest information about school development. To get access to possible 500 participants, I will send an introduction letter and the information sheet to the senior manager of the department about myself and an overview of my research. The manger will send the introduction letter to all the participants on my behalf through

online platform and I will also make appointments with 10 of the participants through this network for individual interviews. At the end of introduction letter and questionnaire, I will express my gratefulness to all the participants and leave my e-mail address for further contact.

2. Information given to participants

An information sheet will be sent to each participant. The information sheet will contain title of research, research aims and process, and what participants need to do, the usage of data, intended finding drawn from data, and report of research. Any potential ethic issues raised from the research would also be informed to the participant, as well as the right to withdraw from the project.

3. Informed consent

When the participants are fully informed about the research process via the information sheet, a consent form will also be sent to participants who are required to sign to indicate that they consent to participate the survey with freedom and they give consent for their data to be used in this study, for they understand all the information offered.

4. Participants right of withdrawal

Participants' rights of withdrawal will be indicated in the information sheet. Participants have rights to withdraw from the study at any time and for any reason. All the information concerning participants who have quitted will also be removed from any research data.

5. Complaints procedure section

The contact details of my supervisor could be found in contact information on information sheet, in case of any complaints about research from participants.

6. Safety and well-being of participants/researchers

Any personal question concerning participants' privacy such as private phone number and home address will not turn up in questionnaire. The research is not involved in sensitive topic, so that sensitive questions will be excluded in questionnaire and interviews. Additionally, researcher will only leave her email address for contact without revealing any other private information.

7. Anonymity/confidentiality

Participants' real identity will not be revealed in this research. If participants are likely to be mentioned in the research, the codes will be adopted instead of their real names. But their real identities will be acquired and reserved in case that it is necessary to contact participants for further cooperation in research. Anonymity security pays more attention to the way in which researchers report information supplied by participants than to the data itself. For instance, the data I collected from five provinces whose name would not be revealed but to be replaced of five capital letters and some description of contextual natures of provinces.

8. Data collection/analysis

The relevant information about the data collection and data analysis process will be communicated through the information sheet. However, if participants desire to know more

about the research before finishing the online survey and attending interviews, they can contact me through contact information I leave in information sheet. Both in process of data collection or data analysis, the identity or other personal information of participants will not be revealed and be kept in confidence.

9. Data storage/Data protection act

All the data collected would be stored in password-protected computer. And also data would be backed up in google drive or other data storage tool. All the data would be safely protected without revealing to others.

10. Feedback

After data analysis, the summary of findings based on data collected from participants will be sent to participants by email according to email addresses they have left in basic information of questionnaire. For some unclear responses, the data will be reinterpreted and be sent to correspondent participants to examine if the data which have been reinterpreted are in agreement with their initial statements in online survey or in interviews. For example, the main points of findings obtained through individual interviews will be shown to participants to examine if the points reveal what they want to express in that time.

11. Reporting of research

My plans about reporting findings based upon data to be collected from participants will be sent to all the participants through information sheet. I believe that the research can be used to improve practice and theory and give raise up to further studies, for it is drawn according to education practical reality. When the outcomes drawn based on the survey is presented in the conference, or is published on academic journal, the relevant information will also be delivered to the participants. If you feel you need to discuss any issue further, or to highlight difficulties, please contact the GSoE's ethics co-ordinators who will suggest possible ways forward.

Signed: [redacted] Researcher) Signed: A. O. Oyewole (Discussant)

Date: 20/12/2016

Appendix VII Statistical Result

Results of Two-way ANOVA (Rural/Urban & Junior/Senior) and One-way ANOVA (10 Schools)

All Survey Items	Two-way ANOVA: (Junior/Senior & Rural/Urban)			One-way ANOVA (10 Schools)
	Rural /Urban, p<0.05	Junior/Senior, p<0.05	Interaction effect, p<0.05	P<0.05, Bonferroni post hoc tests (School 9, p<0.05)
Purpose				
15.1 to improve education quality				
15.2 to promote school development				
15.3 to promote students' overall development				
15.4 to promote teachers' professional development				
15.5 to promote schools to comply with legal regulations	√+			
15.6 to promote educational equity	√+			
15.7 to promote school/teacher accountability				
15.8 to improve student academic outcomes			√	
15.9 to improve parental satisfaction				
Indicator				
Compliance with Legal Regulations				
17.1 Children of rural migrant workers in cities are normally accepted in compulsory education equally to urban children				√+
17.2 School annually holds sports games.				
17.3 In order to release students' learning pressure, the times of running academic exams should comply with relevant laws and regulations.	√+			
17.4 Academic examinations for students in secondary schools are strictly arranged to avoid cheating in exams.				
17.5 The school does not run any paid tutoring centre				
17.6 Financial management of the school strictly complies with national regulations.				
17.7 School teachers and students regularly attend emergency evacuation exercises for safety.				
17.8 Students' places for food and drinking, living and learning where conditions of air, sunshine reach the requirements, to keep infectious and common diseases and food poisoning from students.				
17.9 Students' eyesight is regularly checked in expectation of meeting the standards of students' health.				
17.10 Students' health examination is checked annually and saved in students' health files.				
Organisation and Management				
School Leadership				
18.1 The school staff shares a common set of beliefs about schooling/learning.				
18.2 School development plans have clear focuses and distribution of responsibilities.				
18.3 Head teacher provides parents or guardians with information on the school performance every term.				
18.4 Head teacher provides parents or guardians with information on their students' performance every term.				
18.5 Head teachers regularly participate in observing and evaluating teachers' work in class every term.				

18.6 The leaders' team group tackles the practical issues related to students' learning and teachers' teaching.				
18.7 Teachers are always consulted on important decisions made by the school.				
18.8 Families and communities are actively encouraged to support and promote student learning in collaboration with school.				
School Management				
18.9 All school members are involved in school self-evaluation system.				
18.10 School takes measures to improve teaching and education quality based on feedback given by the inspectors.				
18.11 Teachers are evaluated comprehensively, not solely based on students' academic achievements and the rates of admission to high schools.				
18.12 Formative assessment results are used as evidence to evaluate students.		√+		
18.13 School builds up comprehensive and dynamic individual records on each student to record their overall progress.		√+		
18.14 The school provides students' mental health education and services				
18.15 Teaching resources are assigned fairly and efficiently across different curriculum areas.				
18.16 The internet teaching resources system in school is adequate				
School Environment				
18.17 Create positive learning atmosphere through various cultural events.				
18.18 School layout is fit for purpose.				
18.19 School environment is adequate in terms of attractiveness and cleanliness.				
18.20 No in-school violent incidence is allowed to incur to school students.				
18.21 The environment is inclusive for all without discrimination on the grounds of any grouping or status such as race, colour, sex, ethnicity, age, language, religion, disability, property, or birth.				
Teaching and Learning				
Classroom Teaching				
19.1 School makes full use of traditional festivals and critic historical events to educate students about civic morality.				
19.2 Moral education is attempting to address students' practical issues related to students' self-activation and mental health.				
19.3 Teachers make plans with clear teaching goals and address difficulties of delivering the content to achieve effective classroom teaching.				
19.4 Teachers refer to a problem from everyday life or work to demonstrate why new knowledge is useful.		√+		
19.5 Formal Chinese handwriting, and mandarin should be used in classroom teaching.		√+		
19.6 Teachers continuously reflect on the effects and teaching goals that have been realized in teaching process		√+		
19.7 Teachers play a leading role in taking advantage of educational resource to optimize teaching design in the classroom.		√+		
19.8 Teachers take measures to help poor students improve academic achievements		×		
19.9 Teachers believe that all students can learn.		√+		
19.10 Teachers motivate students' learning interests		×		
19.11 Explorative and practical homework is advocated to be assigned to students.		×		
19.12 Students act as a main part in classroom teaching using active, standard-based participation methods.		×		
19.13 Students' emotion and voice are paid attention during classroom teaching, which		×		

offers continuous support for student-centred learning.				
19.14 Interactive and democrat classroom teaching model is constructed.		×		
19.15 All students are treated equally		×		
19.16 Personal tutoring is applied to students who have special needs.		√+		
19.17 Students' skills of independent thinking, creation and practice are developed.		√+		
19.18 Students conduct self-evaluation to help change and improve classroom teaching based on evaluation results.				
19.19 Students are able to conduct autonomous, cooperative and explorative learning activities by using information technology.				
Teachers' Professional Development				
19.20 Teacher concerns, loves and respects students.				√+
19.21 Teachers are required to publish papers in assigned journals.		√+		
19.22 Teachers' abilities to develop and implement school-based curriculum have been increased continuously.		√+		√+
19.23 Teachers regularly collaborate with other teachers to attend preparation for class altogether in an educational research group.		√+		
19.24 School staff regularly has an open discussion about pupils' learning difficulties.		√+		
19.25 Teachers regularly observe each other in the classroom and give each other feedback		√+		
19.26 Teachers are encouraged to get involved in activities of educational research and academic communication to express opinions.		√+		
19.27 Model teachers play leading roles in professional development.		√+		
19.28 Model classes and teaching competitions improve teachers learning and professional abilities.		√+		√+
19.29 The master of basic educational theories and curriculum standards help teachers build up connections between their major taught subjects with other subjects.		×		√+
19.30 Teachers' working conditions are adequate.		×		
19.31 The structure of teachers' team is reasonable in relation to teachers' age and subjects.		√+		
Students' Learning				
19.32 Students' career education is regularly and adequately conducted.				√+
19.33 The system of optional courses in school is carried on in practice.		√+		
19.34 School makes full use of curriculum resource in and out school to develop distinctive school-based curriculum system to satisfy students' overall development and different characteristics.		√+		
19.35 Thinking and reasoning processes are more important than specific curriculum content.		√+		
19.36 Students regularly attend various art and cultural activities in school.				
19.37 Students regularly attend various practical activities in community and practice base organised by the school, such as labour service and technical training to develop students' labour techniques.				
19.38 Pupil success is termly celebrated in this school.				
Outcome				
20.1 Students have good learning habits and methods.				
20.2 Learners are enthusiastic about learning.				
20.3 Learners enjoy learning.				
20.4 Learners enjoy being at school.				
20.5 Students feel safe at school.				

20.6 Learners are able to think critically to express their views, thoughts, and ideas.				
20.7 Students have developed right value and attitudes, such as having good manners, being diligent and thrifty, protecting the environment, etc.				
20.8 Students have developed right value and attitudes, such as having good manners, being diligent and thrifty, protecting the environment, etc.				
20.9 Learners have sense of self-discipline				
20.10 Learners have abilities to control emotion.	√+			
20.11 Learners are optimistic to overcome difficulties and frustration.	√+			
20.12 Most students are able to communicate and collaborate with others in teamwork.	√+			
20.13 Students develop a good relationship with their classmates and teachers.				
20.14 Students can respect, concern and help others.				
20.15 Students have knowledge and skills to develop healthy living habits.				
20.16 Each student masters some kinds of physical sports techniques.				
20.17 Parents are satisfied with school education quality.		√+		
20.18 Students are satisfied with school education quality.		√+		
20.19 Value added evaluations of students' academic development have increased.		√+		
20.20 Students' overall well-being is satisfactory.		√+		
20.21 The proportions of students who are admitted to higher school are satisfactory.				
Approach/Procedure				
21.1 Parent satisfaction surveys.				
21.2 Pupils' satisfaction surveys.				
21.3 Targets set by the school				
21.4 Use of externally set performance indicators	√-	√+		√-
21.5 Publication of school performance data				
21.6 Comparison of performance with schools of similar socioeconomic characteristics				
21.7 Class observation by external inspectors		√+		√+
21.8 Written Feedback provided by external inspectors		√+		√+
21.9 Verbal Feedback provided by external inspectors		√+		√+
21.10 How frequently that the schools are visited each term		√+		√-
21.11 School self-evaluation report		√+		√-
21.12 Rewards and sanctions received from the inspectors				√+
Consequence				
Performance Indicators and Targets				
22.1 Current performance indicators are appropriate for evaluating the quality of education		√+		
22.2 Setting targets leads to school improvement		√+		√+
22.3 School targets give an accurate indication of the school's efforts to improve performance		√+		
22.4 Target setting is not an important issue for schools	√+			√-
22.5 A focus on quantifiable targets distorts the purposes of education	√+			
External School Inspection				
23.1 School Inspection is necessary to monitor the range and extent of education quality		√+		
23.2 School inspection improves the quality of classroom teaching		√+		√+
23.3 school inspection results in this schools fabricating documents used for school inspection in order to reach inspection standards		√+		√+
23.4 During inspection visits, teachers in your school are prepared and better structure their lectures to reach process standards.		√+		√+

23.5 School inspection requires teachers and head teachers to spend too much time in preparation for school visit and is distracted from teaching and learning.	√+			
School Internal Self-evaluation				
24.1 In general, internal self-evaluation is beneficial for improving teaching		√+		
24.2 There is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school.	√+			√-
24.3 School self-evaluation is just a bureaucratic exercise		√+		
24.4 Internal self-evaluation is beneficial for improving students experience		√+		√+
24.5 Internal self-evaluation is beneficial for improving students' academic outcomes		√+		√+
24.6 Internal self-evaluation is beneficial for improving overall performance of school		√+		√+
Feedback				
25.1 The feedback provided to the teacher during the last inspection visit was insightful to improve classroom teaching		√+		√+
25.2 The inspectorate identified additional strengths that the school had not identified		√+		√+
25.3 The Inspectorate identified additional weaknesses that the school had not identified		√+		√+
25.4 The school in the main will act on the feedback received from the inspectors		√+		√+
25.5 Inspections generated useful feedback for me to improve my teaching practice.		√+		√+
Well-being				
26.1 I feel pressure to improve my teaching as a result of the last inspection visit				√+
26.2 I feel pressure for my school overall to do well on the inspection standards	√+			√+
26.3 When my school is inspected every term, I feel additional pressure.				
26.4 When my school is inspected every term, my workload is generated to prepare for inspection.		√+		
Inspection Standards				
27.1 Improvement of the evaluation and supervision of teachers		√+		
27.2 Improvement of self-evaluation processes of the school		√+		
27.3 Teachers in my school are discouraged from experimenting with new teaching methods that do not fit the scoring rubric of the Inspectorate.		√+		√+
27.4 School inspection standards have resulted in narrowing curriculum and instruction strategies in my school				
27.5 The preparation for the inspection visit led to improvement changes in the teaching and learning in my school		√+		
27.6 The preparation for the inspection visit led to improvement in leadership, management, organisation in my school				
Rewards/Sanctions				
28.1 If the school where you are working in was rewarded by Inspectorate, are you more likely to be encouraged to work harder.				
28.2 If the school where you are working in got sanctions from Inspectorate, are you more likely to actively focus on resolving problems that Inspectorate pointed out.				

Note: √+ =rural/junior significantly higher than urban/senior; √- =rural/junior significantly lower than urban/senior
√+ =school 9 significantly higher than other schools; √- =school 9 significantly lower than other schools
Blank sells = nonsignificant results

Demographic Information

Item		Frequency	Percent
Gender	Male	98	26.9
	Female	266	73.1
Position	Headteacher	6	1.6
	Teacher	337	92.6
	Staff	21	5.8
Professional Title	'Zheng' senior JHS teacher (equivalent to professor in university)	1	.3
	Senior JHS teachers (equivalent to reader in university)	47	12.9
	First-rank JHS teacher	182	50.0
	Second-rank JHS teacher	108	29.7
	Third-rank JHS teacher	10	2.7
	Others (Please specify)	16	4.4
Teaching Grade	The first JHS year	121	33.2
	The second JHS year	83	22.8
	The third JHS year	116	31.9
	Both the first year and the second year	13	3.6
	Both the second year and the third year	4	1.1
	Both the first year and the third year	1	.3
	All	26	7.1
Degree	Postgraduate and above	36	9.9
	University undergraduate (offering degree programs)	320	87.9
	Non-university tertiary	8	2.2
Teaching Subject	Chinese	63	17.3
	Mathematics	76	20.9
	English	51	14.0
	Chemistry	18	4.9
	Physics	20	5.5
	Biology	26	7.1
	History	20	5.5
	Geography	21	5.8
	Arts	4	1.1
	Music	5	1.4
	PE and Health	20	5.5
	ICT	11	3.0
	Ideology and Politics	17	4.7
	Society and Citizen-ship	1	.3
	Other	11	3.0
School Location	City	192	52.7

	Township/county	172	47.3
School Level	Regular School	92	25.3
	Township/county model school	49	13.5
	City model school	104	28.6
	Provincial or national model school	119	32.7

Note: n=364

Item	Valid	Mean	Std. Deviation	Minimum	Maximum
Age	363	40.47	7.95	0	62
Teaching Years	351	18.39	8.31	0	37
Teaching Year in this school	349	12.58	7.92	0	35
Frequency of inspection last year	345	2.77	2.83	1	10

Did you play any roles in the latest school inspection?	Frequency	Percent
Teaching a class observed by inspectors	141	38.8
Preparing for class that will be observed by inspectors.	118	32.5
Preparing teaching material/files for school inspection.	226	62.3
Talking to an inspector about teaching and learning in this school	123	33.9
Talking to an inspector about non-teaching and learning matters in this school	31	8.5
Other	24	6.6

Note: n=363

1. In your view, to which degree do you agree on the purposes listed below in relation to provincial external inspection?

Indicator	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD
10) to improve education quality	8(2.2%)	7(1.9%)	54(14.8%)	191(52.5%)	103(28.3%)	4.03	.842
11) to promote school development	6(1.6%)	5(1.4%)	49(13.5%)	186(51.1%)	117(32.1%)	4.11	.807
12) to promote students' overall development	6(1.6%)	10(2.7%)	55(15.1%)	174(47.8%)	118(32.4%)	4.07	.856
13) to promote teachers' professional development	6(1.6%)	7(1.9%)	57(15.7%)	177(48.6%)	116(31.9%)	4.07	.836
14) to promote schools to comply with legal regulations	7(1.9%)	4(1.1%)	52(14.3%)	175(48.1%)	125(34.3%)	4.12	.832
15) to promote educational equity	4(1.1%)	13(3.6%)	62(17.0 %)	167(45.9%)	117(32.1%)	4.05	.858
16) to promote school/teacher accountability	5(1.4%)	17(4.7%)	71(20.1%)	171(47.8%)	94(25.8%)	3.92	.876

17) to improve student academic outcomes	7(1.9%)	11(3.0%)	68(18.7%)	168(46.2%)	109(29.9%)	3.99	.886
18) to improve parental satisfaction	5(1.4%)	6(1.6%)	78(21.4%)	168(46.2%)	106(29.11%)	4.00	.836

Note: n=363

2. "Compliance with Legal Regulations" is a part of provincial external school inspection content, in your view, how important are the indicators below to demonstrate education quality?

Indicator	Not important at all	Not very important	Important	Very important	The most important	Mean	SD
13) Children of rural migrant workers in cities are normally accepted in compulsory education equally to urban children	3(0.82%)	6(1.65%)	32(8.79%)	130(35.71%)	192(52.75%)	4.38	.780
14) School annually holds sports games.	0(0%)	10(2.75%)	29(7.97%)	108(29.67%)	214(58.79%)	4.46	.759
15) In order to release students' learning pressure, the times of running academic exams should comply with relevant laws and regulations.	1(0.27%)	10(2.75%)	31(8.52%)	115(31.59%)	204(56.04%)	4.42	.785
16) Academic examinations for students in secondary schools are strictly arranged to avoid cheating in exams.	2(0.55%)	7(1.92%)	18(4.95%)	84(23.08%)	250(68.68%)	4.59	.725
17) The school does not run any paid tutoring centre	2(0.55%)	8(2.2%)	30(8.24%)	93(25.55%)	228(62.64%)	4.49	.786
18) Financial management of the school strictly complies with national regulations.	2(0.55%)	6(1.65%)	22(6.04%)	89(24.45%)	242(66.48%)	4.56	.732
19) School teachers and students regularly attend emergency evacuation exercises for safety.	1(0.27%)	6(1.65%)	17(4.67%)	87(23.9%)	250(68.68%)	4.6	.683
20) Students' places for food and drinking, living and learning where conditions of air, sunshine reach the requirements, to keep infectious and common diseases and food poisoning from students.	0(0%)	7(1.92%)	18(4.95%)	74(20.33%)	262(71.98%)	4.64	.670
21) Students' eyesight is regularly checked in expectation of meeting the standards of students' health.	2(0.55%)	7(1.92%)	16(4.4%)	92(25.27%)	244(67.03%)	4.58	.719
22) Students' health examination is checked annually and saved in students' health files.	3(0.82%)	5(1.37%)	18(4.95%)	80(21.98%)	255(70.05%)	4.6	.723

Note: 1, n=363; 2-9 n=361

3. “Organization and Management in the School” is a part of provincial external school inspection content, in your view, how important are the indicators below to demonstrate education quality?

Indicator	Not important at all	Not very important	Important	Very important	The most important	Mean	SD
School Leadership							
9) The school staff shares a common set of beliefs about schooling/learning.	4(1.1%)	4(1.1%)	21(5.77%)	122(33.52%)	210(57.69%)	4.47	.753
10) School development plans have clear focuses and distribution of responsibilities.	3(0.82%)	2(0.55%)	22(6.04%)	112(30.77%)	222(60.99%)	4.52	.712
11) Headteacher provides parents or guardians with information on the school performance every term.	3(0.82%)	3(0.82%)	31(8.52%)	120(32.97%)	203(55.77%)	4.44	.755
12) Headteacher provides parents or guardians with information on their students’ performance every term.	4(1.1%)	2(0.55%)	25(6.87%)	126(34.62%)	203(55.77%)	4.45	.745
13) Headteachers regularly participate in observing and evaluating teachers’ work in class every term.	2(0.55%)	6(1.65%)	25(6.87%)	120(32.97%)	206(56.59%)	4.45	.746
14) The leaders’ team group tackles the practical issues related to students’ learning and teachers’ teaching.	2(0.55%)	1(0.27%)	23(6.32%)	101(27.75%)	232(63.74%)	4.56	.678
15) Teachers are always consulted on important decisions made by the school.	3(0.82%)	5(1.37%)	19(5.22%)	101(27.75%)	231(63.46%)	4.54	.735
16) Families and communities are actively encouraged to support and promote student learning in collaboration with school.	3(0.82%)	4(1.1%)	21(5.77%)	105(28.85%)	226(62.09%)	4.52	.731
School Management							
9) All school members are involved in school self-evaluation system.	5(1.37%)	7(1.92%)	26(7.14%)	108(29.67%)	213(58.52%)	4.44	.823
10) School takes measures to improve teaching and education quality based on feedback given by the inspectors.	4(1.1%)	6(1.65%)	24(6.59%)	112(30.77%)	213(58.52%)	4.46	.786
11) Teachers are evaluated comprehensively, not solely based on students' academic achievements and the rates of admission to high schools.	2(0.55%)	6(1.65%)	16(4.4%)	96(26.37%)	239(65.66%)	4.57	.709
12) Formative assessment results are used as evidence to evaluate students.	2(0.55%)	4(1.1%)	23(6.32%)	111(30.49%)	219(60.16%)	4.51	.716
13) School builds up comprehensive and dynamic individual records on each student to record their overall progress.	2(0.55%)	6(1.65%)	25(6.87%)	110(30.22%)	216(59.34%)	4.48	.747
14) The school provides students’ mental health education and services	3(0.82%)	3(0.82%)	20(5.49%)	116(31.87%)	217(59.62%)	4.51	.716
15) Teaching resources are assigned fairly and efficiently across different curriculum areas.	2(0.55%)	6(1.65%)	19(5.22%)	120(32.97%)	212(58.24%)	4.49	.724
16) The internet teaching resources system in school is adequate	2(0.55%)	7(1.92%)	19(5.22%)	122(33.52%)	209(57.42%)	4.47	.735
School Environment							
6) Create positive learning atmosphere through various cultural events.	3(0.82%)	5(1.37%)	17(4.67%)	119(32.69%)	215(59.07%)	4.5	.728

7) School layout is fit for purpose.	4(1.1%)	4(1.1%)	21(5.77%)	121(33.24%)	209(57.42%)	4.47	.754
8) School environment is adequate in terms of attractiveness and cleanliness.	4(1.1%)	3(0.82%)	23(6.32%)	121(33.24%)	208(57.14%)	4.47	.750
9) No in-school violent incidence is allowed to incur to school students.	4(1.1%)	3(0.82%)	20(5.49%)	85(23.35%)	246(67.58%)	4.58	.736
10) The environment is inclusive for all without discrimination on the grounds of any grouping or status such as race, colour, sex, ethnicity, age, language, religion, disability, property, or birth.	3(0.82%)	3(0.82%)	24(6.59%)	97(26.65%)	231(63.46%)	4.54	.731

Note: 1, n= 361; 2-8, n=359; 1-8, n=359; 1-3, n=359; 4-5, n=358

4. “Teaching and Learning” is a part of provincial external school inspection content, in your view, how important are the indicators below to demonstrate education quality?

Indicator	Not important at all	Not very important	Important	Very important	The most important	Mean	SD
Classroom Teaching							
20) School makes full use of traditional festivals and critic historical events to educate students about civic morality.	3(0.82%)	4(1.1%)	20(5.49%)	131(35.99%)	200(54.95%)	4.46	.727
21) Moral education is attempting to address students’ practical issues related to students’ self-activation and mental health.	2(0.55%)	1(0.27%)	23(6.32%)	114(31.32%)	218(59.89%)	4.52	.681
22) Teachers make plans with clear teaching goals and address difficulties of delivering the content to achieve effective classroom teaching.	2(0.55%)	3(0.82%)	15(4.12%)	116(31.87%)	222(60.99%)	4.54	.671
23) Teachers refer to a problem from everyday life or work to demonstrate why new knowledge is useful.	2(0.55%)	2(0.55%)	16(4.4%)	127(34.89%)	211(57.97%)	4.52	.664
24) Formal Chinese handwriting and mandarin should be used in classroom teaching.	2(0.55%)	1(0.27%)	19(5.22%)	129(35.44%)	207(56.87%)	4.5	.664
25) Teachers continuously reflect on the effects and teaching goals that have been realized in teaching process	2(0.55%)	2(0.55%)	16(4.4%)	118(32.42%)	220(60.44%)	4.54	.663
26) Teachers play a leading role in taking advantage of educational resource to optimize teaching design in the classroom.	0(0%)	4(1.1%)	15(4.12%)	129(35.44%)	210(57.69%)	4.52	.634
27) Teachers take measures to help poor students improve academic achievements	0(0%)	4(1.1%)	18(4.95%)	125(34.34%)	211(57.97%)	4.52	.647
28) Teachers believe that all students can learn.	1(0.27%)	6(1.65%)	39(10.71%)	120(32.97%)	192(52.75%)	4.39	.768
29) Teachers motivate students’ learning interests	0(0%)	1(0.27%)	23(6.32%)	128(35.16%)	206(56.59%)	4.51	.630
30) Explorative and practical homework is advocated to be assigned to students.	0(0%)	3(0.82%)	30(8.24%)	132(36.26%)	193(53.02%)	4.44	.682
31) Students act as a main part in classroom teaching using active, standard-based participation methods.	0(0%)	2(0.55%)	16(4.4%)	119(32.69%)	221(60.71%)	4.56	.608
32) Students' emotion and voice are paid attention during	1(0.27%)	1(0.27%)	15(4.12%)	132(36.26%)	209(57.42%)	4.53	.620

classroom teaching, which offers continuous support for student-centred learning.							
33) Interactive and democrat classroom teaching model is constructed.	0(0%)	1(0.27%)	19(5.22%)	128(35.16%)	210(57.69%)	4.53	.611
34) All students are treated equally	0(0%)	2(0.55%)	14(3.85%)	119(32.69%)	223(61.26%)	4.57	.598
35) Personal tutoring is applied to students who have special needs.	0(0%)	2(0.55%)	25(6.87%)	128(35.16%)	203(55.77%)	4.49	.651
36) Students' skills of independent thinking, creation and practice are developed.	0(0%)	1(0.27%)	18(4.95%)	123(33.79%)	216(59.34%)	4.55	.605
37) Students conduct self-evaluation to help change and improve classroom teaching based on evaluation results.	1(0.27%)	2(0.55%)	30(8.24%)	134(36.81%)	191(52.47%)	4.43	.694
38) Students are able to conduct autonomous, cooperative and explorative learning activities by using information technology.	1(0.27%)	4(1.1%)	24(6.59%)	132(36.26%)	197(54.12%)	4.45	.696
Teachers' Professional Development							
14) Teacher concerns, loves and respects students.	0(0%)	1(0.27%)	13(3.57%)	107(29.4%)	237(65.11%)	4.62	.571
15) Teachers' morality is regarded as critical evidence for recruitment and evaluation of teachers.	1(0.27%)	4(1.1%)	17(4.67%)	100(27.47%)	236(64.84%)	4.58	.663
16) Teachers are required to publish papers in assigned journals.	24(6.59%)	19(5.22%)	65(17.86%)	105(28.85%)	145(39.84%)	3.92	1.183
17) Teachers' abilities to develop and implement school-based curriculum have been increased continuously.	5(1.37%)	12(3.3%)	36(9.89%)	133(36.54%)	172(47.25%)	4.27	.877
18) Teachers regularly collaborate with other teachers to attend preparation for class altogether in an educational research group.	1(0.27%)	2(0.55%)	25(6.87%)	126(34.62%)	204(56.04%)	4.48	.676
19) School staff regularly has an open discussion about pupils' learning difficulties.	1(0.27%)	4(1.1%)	16(4.4%)	130(35.71%)	207(56.87%)	4.5	.664
20) Teachers regularly observe each other in the classroom and give each other feedback	2(0.55%)	2(0.55%)	25(6.87%)	135(37.09%)	194(53.3%)	4.44	.699
21) Teachers are encouraged to get involved in activities of educational research and academic communication to express opinions.	3(0.82%)	2(0.55%)	28(7.69%)	136(37.36%)	189(51.92%)	4.41	.731
22) Model teachers play leading roles in professional development.	2(0.55%)	3(0.82%)	22(6.04%)	130(35.71%)	201(55.22%)	4.47	.700
23) Model classes and teaching competitions improve teachers learning and professional abilities.	3(0.82%)	2(0.55%)	26(7.14%)	140(38.46%)	187(51.37%)	4.41	.723
24) The master of basic educational theories and curriculum standards help teachers build up connections between their major taught subjects with other subjects.	1(0.27%)	3(0.82%)	24(6.59%)	136(37.36%)	194(53.3%)	4.45	.683
25) Teachers' working conditions are adequate.	2(0.55%)	0(0%)	18(4.95%)	117(32.14%)	221(60.71%)	4.55	.645
26) The structure of teachers' team is reasonable in relation to teachers' age and subjects.	4(1.1%)	1(0.27%)	19(5.22%)	119(32.69%)	215(59.07%)	4.51	.713

Students' Learning							
10) Students' career education is regularly and adequately conducted.	4(1.1%)	5(1.37%)	30(8.24%)	138(37.91%)	181(49.73%)	4.36	.786
11) The system of optional courses in school is carried on in practice.	5(1.37%)	6(1.65%)	27(7.42%)	135(37.09%)	185(50.82%)	4.37	.808
12) School makes full use of curriculum resource in and out school to develop distinctive school-based curriculum system to satisfy students' overall development and different characteristics.	3(0.82%)	2(0.55%)	29(7.97%)	132(36.26%)	192(52.75%)	4.42	.736
13) Thinking and reasoning processes are more important than specific curriculum content.	2(0.55%)	2(0.55%)	24(6.59%)	115(31.59%)	215(59.07%)	4.51	.697
14) Students regularly attend various art and cultural activities in school.	2(0.55%)	3(0.82%)	26(7.14%)	129(35.44%)	198(54.4%)	4.45	.715
15) Students regularly attend various practical activities in community and practice base organised by the school, such as labour service and technical training to develop students' labour techniques.	3(0.82%)	3(0.82%)	22(6.04%)	133(36.54%)	197(54.12%)	4.45	.723
16) Pupil success is termly celebrated in this school.	3(0.82%)	0(0%)	19(5.22%)	132(36.26%)	204(56.04%)	4.49	.677

Note: n= 358

5. "Outcome" is a part of provincial external school inspection content, in your view, how important are the indicators below to demonstrate education quality?

Indicator	Not important at all	Not very important	Important	Very important	The most important	Mean	SD
22) Students have good learning habits and methods.	1(0.27%)	0(0%)	20(5.49%)	107(29.4%)	230(63.19%)	4.58	.625
23) Learners are enthusiastic about learning.	0(0%)	2(0.55%)	18(4.95%)	107(29.4%)	231(63.46%)	4.58	.615
24) Learners enjoy learning.	0(0%)	0(0%)	20(5.49%)	113(31.04%)	225(61.81%)	4.57	.598
25) Learners enjoy being at school.	0(0%)	0(0%)	18(4.95%)	124(34.07%)	216(59.34%)	4.55	.591
26) Students feel safe at school.	0(0%)	0(0%)	19(5.22%)	104(28.57%)	235(64.56%)	4.6	.589
27) Students are able to use existing knowledge to frame, analyse and solve problems.	1(0.27%)	0(0%)	21(5.77%)	112(30.77%)	224(61.54%)	4.56	.631
28) Learners are able to think critically to express their views, thoughts, and ideas.	0(0%)	2(0.55%)	18(4.95%)	121(33.24%)	217(59.62%)	4.54	.619
29) Students have developed right value and attitudes, such as having good manners, being diligent and thrifty, protecting the environment, etc.	0(0%)	0(0%)	19(5.22%)	116(31.87%)	223(61.26%)	4.57	.594
30) Learners have sense of self-discipline	0(0%)	1(0.27%)	17(4.67%)	119(32.69%)	221(60.71%)	4.56	.599
31) Learners have abilities to control emotion.	0(0%)	1(0.27%)	19(5.22%)	113(31.04%)	225(61.81%)	4.57	.608
32) Learners are optimistic to overcome difficulties and frustration.	0(0%)	1(0.27%)	18(4.95%)	116(31.87%)	223(61.26%)	4.57	.603
33) Most students are able to communicate and collaborate with	0(0%)	0(0%)	21(5.77%)	112(30.77%)	225(61.81%)	4.57	.603

others in teamwork.							
34) Students develop a good relationship with their classmates and teachers.	1(0.27%)	0(0%)	19(5.22%)	113(31.04%)	225(61.81%)	4.57	.621
35) Students can respect, concern and help others.	1(0.27%)	0(0%)	19(5.22%)	117(32.14%)	221(60.71%)	4.56	.623
36) Students have knowledge and skills to develop healthy living habits.	0(0%)	1(0.27%)	21(5.77%)	118(32.42%)	218(59.89%)	4.54	.619
37) Each student masters some kinds of physical sports techniques.	0(0%)	3(0.82%)	24(6.59%)	119(32.69%)	212(58.24%)	4.51	.660
38) Parents are satisfied with school education quality.	0(0%)	0(0%)	23(6.32%)	128(35.16%)	207(56.87%)	4.51	.616
39) Students are satisfied with school education quality.	0(0%)	0(0%)	23(6.32%)	124(34.07%)	211(57.97%)	4.53	.616
40) Value added evaluations of students' academic development have increased.	0(0%)	2(0.55%)	27(7.42%)	126(34.62%)	203(55.77%)	4.48	.660
41) Students' overall well-being is satisfactory.	0(0%)	0(0%)	29(7.97%)	125(34.34%)	204(56.04%)	4.49	.643
42) The proportions of students who are admitted to higher school are satisfactory.	0(0%)	0(0%)	35(9.62%)	124(34.07%)	199(54.67%)	4.46	.667

Note: n=358

6. To what extent do you think the following procedures of external city school inspection contribute to high quality in education in your school?

Indicator	Not important at all	Not very important	Important	Very important	The most important	Mean	SD
13) Parent satisfaction surveys.	8(2.2%)	5(1.37%)	74(20.33%)	125(34.34%)	146(40.11%)	4.11	.929
14) Pupils' satisfaction surveys.	3(0.82%)	6(1.65%)	67(18.41%)	130(35.71%)	152(41.76%)	4.18	.851
15) Targets set by the school	4(1.1%)	3(0.82%)	71(19.51%)	131(35.99%)	149(40.93%)	4.17	.850
16) Use of externally set performance indicators	5(1.37%)	8(2.2%)	72(19.78%)	134(36.81%)	139(38.19%)	4.1	.893
17) Publication of school performance data	5(1.37%)	3(0.82%)	65(17.86%)	132(36.26%)	153(42.03%)	4.19	.857
18) Comparison of performance with schools of similar socioeconomic characteristics	8(2.2%)	8(2.2%)	70(19.23%)	126(34.62%)	146(40.11%)	4.1	.941
19) Class observation by external inspectors	7(1.92%)	15(4.12%)	77(21.15%)	125(34.34%)	134(36.81%)	4.02	.967
20) Written Feedback provided by external inspectors	9(2.47%)	8(2.2%)	75(20.6%)	135(37.09%)	131(35.99%)	4.04	.945
21) Verbal Feedback provided by external inspectors	8(2.2%)	10(2.75%)	74(20.33%)	141(38.74%)	125(34.34%)	4.02	.933
22) How frequently that the schools are visited each term	18(4.95%)	10(2.75%)	84(23.08%)	121(33.24%)	125(34.34%)	3.91	1.069
23) School self-evaluation report	12(3.3%)	12(3.3%)	66(18.13%)	131(35.99%)	137(37.64%)	4.03	1.002
24) Rewards and sanctions received from the inspectors	6(1.65%)	10(2.75%)	77(21.15%)	122(33.52%)	143(39.29%)	4.08	.935

Note: n=358

7. What are your views about the performance indicators and targets currently defined by the external city inspectorates?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD

6) Current performance indicators are appropriate for evaluating the quality of education	7(1.92%)	12(3.3%)	103(28.3%)	139(38.19%)	97(26.65%)	3.86	.922
7) Setting targets leads to school improvement	9(2.47%)	9(2.47%)	94(25.82%)	138(37.91%)	108(29.67%)	3.91	.941
8) School targets give an accurate indication of the school's efforts to improve performance	8(2.2%)	6(1.65%)	99(27.2%)	134(36.81%)	111(30.49%)	3.93	.923
9) Target setting is not an important issue for schools	7(1.92%)	52(14.29%)	104(28.57%)	110(30.22%)	85(23.35%)	3.6	1.061
10) A focus on quantifiable targets distorts the purposes of education	3(0.82%)	19(5.22%)	88(24.18%)	128(35.16%)	120(32.97%)	3.96	.932

Note: n=358

8. What are your views about impacts of external city school inspection on improving education quality?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD
6) School Inspection is necessary to monitor the range and extent of education quality	7(1.92%)	22(6.04%)	91(25%)	131(35.99%)	107(29.4%)	3.86	.979
7) School inspection improves the quality of classroom teaching	7(1.92%)	32(8.79%)	90(24.73%)	123(33.79%)	106(29.12%)	3.81	1.023
8) school inspection results in this schools fabricating documents used for school inspection in order to reach inspection standards	11(3.02%)	45(12.36%)	100(27.47%)	113(31.04%)	89(24.45%)	3.63	1.082
9) During inspection visits, teachers in your school are prepared and better structure their lectures to reach process standards.	7(1.92%)	44(12.09%)	88(24.18%)	129(35.44%)	90(24.73%)	3.7	1.039
10) School inspection requires teachers and head teachers to spend too much time in preparation for school visit, and is distracted from teaching and learning.	15(4.12%)	65(17.86%)	85(23.35%)	109(29.95%)	84(23.08%)	3.51	1.156

Note: n=358

9. Evaluating the quality and evidence from internal evaluation processes is a significant part of external city inspection procedure, what are your views about internal evaluation processes of education quality in your school?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD
8) In general, internal self-evaluation is beneficial for improving teaching	8(2.2%)	15(4.12%)	79(21.7%)	159(43.68%)	97(26.65%)	3.9	.923
9) There is no need for formal internal self-evaluation by schools because teachers are aware of what is happening in the class or the school.	9(2.47%)	87(23.9%)	88(24.18%)	117(32.14%)	57(15.66%)	3.35	1.089
10) School self-evaluation is just a bureaucratic exercise	8(2.2%)	48(13.19%)	98(26.92%)	134(36.81%)	70(19.23%)	3.59	1.019

11) Internal self-evaluation is beneficial for improving students experience	4(1.1%)	18(4.95%)	88(24.18%)	147(40.38%)	101(27.75%)	3.9	.907
12) Internal self-evaluation is beneficial for improving students' academic outcomes	7(1.92%)	21(5.77%)	88(24.18%)	145(39.84%)	97(26.65%)	3.85	.952
13) Internal self-evaluation is beneficial for improving overall performance of school	5(1.37%)	20(5.49%)	92(25.27%)	145(39.84%)	96(26.37%)	3.86	.925
14) Internal school inspection is carried out properly in this school in line with published criteria.	4(1.1%)	11(3.02%)	92(25.27%)	154(42.31%)	97(26.65%)	3.92	.864

Note: n=358

10. What are your views about impacts of feedback given by external city inspectors after school visit on improving education quality? Please think about the inspection visit you had during the previous academic year.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD
6) The feedback provided to the teacher during the last inspection visit was insightful to improve classroom teaching	4(1.1%)	17(4.67%)	98(26.92%)	156(42.86%)	83(22.8%)	3.83	.877
7) The inspectorate identified additional strengths that the school had not identified	6(1.65%)	18(4.95%)	103(28.3%)	145(39.84%)	86(23.63%)	3.8	.918
8) The Inspectorate identified additional weaknesses that the school had not identified	7(1.92%)	11(3.02%)	107(29.4%)	154(42.31%)	79(21.7%)	3.8	.884
9) The school in the main will act on the feedback received from the inspectors	6(1.65%)	6(1.65%)	94(25.82%)	153(42.03%)	99(27.2%)	3.93	.868
10) Inspections generated useful feedback for me to improve my teaching practice.	8(2.2%)	12(3.3%)	104(28.57%)	143(39.29%)	91(25%)	3.83	.924

Note: n=358

11. What are your views about impacts of external city school inspection on your own well-being?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD
7) I feel pressure to improve my teaching as a result of the last inspection visit	5(1.37%)	31(8.52%)	99(27.2%)	157(43.13%)	66(18.13%)	3.69	.917
8) I feel pressure for my school overall to do well on the inspection standards	6(1.65%)	39(10.71%)	109(29.95%)	132(36.26%)	72(19.78%)	3.63	.978
9) When my school is inspected every term, I feel additional pressure.	5(1.37%)	35(9.62%)	92(25.27%)	153(42.03%)	73(20.05%)	3.71	.946
10) When my school is inspected every term, my workload is generated to prepare for inspection.	6(1.65%)	34(9.34%)	83(22.8%)	161(44.23%)	74(20.33%)	3.73	.949

Note: n=358

12. In your school, what are your views about impacts of city inspection standards on areas shown as below?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD
8) Improvement of the evaluation and supervision of teachers	3(0.82%)	3(0.82%)	101(27.75%)	174(47.8%)	77(21.15%)	3.89	.772
9) Improvement of self-evaluation processes of the school	4(1.1%)	3(0.82%)	96(26.37%)	178(48.9%)	77(21.15%)	3.9	.780
10) Teachers in my school are discouraged from experimenting with new teaching methods that do not fit the scoring rubric of the Inspectorate.	20(5.49%)	93(25.55%)	96(26.37%)	103(28.3%)	46(12.64%)	3.17	1.122
11) School inspection standards have resulted in narrowing curriculum and instruction strategies in my school	13(3.57%)	97(26.65%)	96(26.37%)	110(30.22%)	42(11.54%)	3.2	1.075
12) The preparation for the inspection visit led to improvement changes in the teaching and learning in my school	4(1.1%)	13(3.57%)	111(30.49%)	155(42.58%)	75(20.6%)	3.79	.851
13) The preparation for the inspection visit led to improvement in leadership, management, organisation in my school	3(0.82%)	11(3.02%)	106(29.12%)	163(44.78%)	75(20.6%)	3.83	.822

Note: n=358

13. What are your views about impacts of external city inspection rewards or sanctions received from the city inspectorate?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean	SD
3) If the school where you are working in was rewarded by Inspectorate, are you more likely to be encouraged to work harder.	4(1.1%)	7(1.92%)	76(20.88%)	180(49.45%)	91(25%)	3.97	.804
4) If the school where you are working in got sanctions from Inspectorate, are you more likely to actively focus on resolving problems that Inspectorate pointed out.	6(1.65%)	11(3.02%)	83(22.8%)	176(48.35%)	82(22.53%)	3.89	.851

Note: n=358

Appendix VIII Qualitative Data Analysis Coding Framework (Interview & Open-ended Survey Items)

Code	1st Level Sub-code	2nd and 3rd Level Sub-code	Example Quotes for Each Sub-code	RQ
Concept of Education Quality	1.Non-academic achievement	1.1 Student social competencies 1.2 Student feelings about school and learning 1.3 Student attitudes	1.1 *Education quality is reflected in students' interaction and communication with other people.* (NI-S) 1.2 *To examine if the school has realised the goal of education quality, we should make a judgement based on the fact that if students are fond of having classes and if they are interested in all classes at school.* (TW-RS1) 1.3 *Students' personalities and behaviours are undoubtedly related to student individual development. More noteworthy, students' daily behaviour will exert positive or negative influence on the school environment which will, in turn, influence student attitude/value through student peer-influence* (TB-US9).	1
Purpose of School Inspection	1.Conform to legal regulations	1.1 Supervision and correction	1.1 *When I inspected one school, I found that some teachers were lecturing for students using break time at noon which was not allowed by educational regulations. We cannot replace the law with emotion (CI-Y)*	1
	2.Weak Accountability	2.1 The lack of independent executive power of school inspection 2.2 Barriers for publication of school performance	2.1 […] *in essence, school inspectorates are still depending on and administered by the Ministry of Education, this seriously affects if school inspection could play its roles independently* (EO-W). 2.2 *Publication of school inspection results cannot draw as much attention from parents as expected since in the long run school inspection results have not been paid enough attention*. (HTM-RS1)	1
	3. Improvement	3.1 Suggestions for school improvement are offered	3.1 *Inspectorates are attempting to look for existing issues of schools, direct, and promote schools to improve.* (TQ-US2)	1
Strengths and Weaknesses in process of school inspection	1. Strengths	1.1 School development plan accommodates school context 1.2 Inspectors' feedback in support of school improvement 1.3 Rewards could motivate teachers to improve	1.1 *Currently, schools make development plan depending on schools' capacity, which could reflect schools' identical characteristics.* (HTSH-US2) 1.2 *In-time school inspection is powerful in offering guidance for classroom teaching and the quality of classroom teaching.* (Open-ended survey items) 1.3 *Rewards are regarded as a kind of incentive for schools to make more progress.* (CI-S)	4
	2. Weaknesses	2.1 Rehearsed panel-interview 2.2 Fabrication of school documents 2.3 Unpractical inspection indicators affect quality of school inspection 2.4 Increased pressure from frequent school inspection	2.1 *We are also very helpless in that parents who participate in group interview have already been informed by schools in advance about preparing answers of interview questions. Similarly, the information provided by teachers and students are not that reliable.* (CI-S) 2.2 *In order to cope with school inspection, teachers usually prepare two versions of curriculum schedule. One is for daily classroom teaching, and the other one is for school inspection*. (TP-UJ9) 2.3 *Data collected by inspectors for school inspection cannot adequately reflect the real situation of the school*. (Open-ended survey item) 2.4 *Our school is inspected for three to four times per year, which is too frequent for teachers to deal with. Since, every time we felt so anxious to prepare for school inspection and our working schedule was disturbed.* (TQ-US2)	4
Improvement of School Inspection	1. Addressing the Gap in Inspection Indicators	1.1 Equity in student outcomes	1.1 *Equity in students' outcome has been a gap of school inspection, which is supposed to be paid more attention by the inspectorates*. (EO-W)	5

	2.Inspecting multi-form of school documents	2.1 Less textual document 2.2 More dynamic document	2.1 *It is easier to fabricate textual materials particularly when the school failed in finishing the tasks demanded by the inspectorates.* (TB-US9). 2.2 *But other dynamic materials for instance, video, photos should be mainly inspected, for these materials could offer more true information and be more difficult to fabricate than the textual documents*. (TH-RJ1)	5
	3.Conducting alternative form of survey	3.1 Off-site questionnaire 3.2 Informal Survey	3.1 *Nowadays, questionnaire survey for parents can be conducted through telephone, we do not know what they talked about. I believe that at that moment parents were honest and would tell the truth.* (TB-US9). 3.2 *Inspectors could directly investigate students randomly in the schoolyard, for instance, did your school hold any activities related to your safety and health?* (HTM-RS1)	5
	4.No pre-noticed school inspection	4.1 Drop in schools at any time 4.2 Avoid prior preparation	4.1 *Directly going into classroom to observe teachers' class is a good way to learn how the educational quality in the school.* (NI-S) 4.2 *Don't tell schools in advance that inspectors are going to visit*. (Open-ended survey items)	5
Policy Context of Education and the School Inspection System	1. Students' participation in interactive classroom teaching	1.1 Promoting students' activity in classroom teaching 1.2 Improving students' independent thinking abilities	1.1 *Most of time questions are to be addressed by students themselves through group discussion and cooperation. I only give some advice when it is necessary.* (T-WO) 1.2. *Independent thinking ability cannot be obtained through mechanically repeating others' ideas* (NI-S).	6
	2.Teachers' professional development	2.1 Classroom teaching is more important than professional learning 2.2 Professional learning improves teaching practice 2.3Rewards motivate teachers work hard	2.1 *Nowadays, the requirements for publishing papers are lowered, since our teaching burden has already been very heavy. It takes a lot of time for teachers to finish writing a paper. As a result, the time spent in teaching students would be reduced.* (HTSH-US9) 2.2 *I think paper publication and project inquiry are good for improving teaching practice for me. We could experiment a kind of pedagogy in practice of classroom teaching.* (TH-RJ1) 2.3 *Teachers who are awarded for teaching performance are often seen as models for other teachers in our school. This is a stimulus for those teachers who have not been awarded to work hard. This kind of incentive is necessary for maintaining teachers' enthusiasm for work.* (TB-US9)	6
	3. Barriers for student over-round education quality	3.1 Students' learning pressure 3.2 Dominant exam-oriented evaluation system	3.1 *Students' learning pressure is so big. The whole day is occupied by various classes.* (TP-UJ9) 3.2 *Parents only focuses on students' academic achievement regardless of students' overall development.* (TB-US9)	6
	4.Equity Issues	4.1 Imbalanced distribution of education resources 4.2 Family support 4.3 School climate	4.1 *I think the educational expenditures in the urban schools are sufficient, so that they have extra money to construct school culture and climate.* (HTM-RS1) 4.2 *Students in my school are relaxed during holiday since their families cannot afford extra tuition fees to support their children.* (TP-UJ9) 4.3 *The learning climate in the urban school cannot be caught up by rural schools within a short term.* (CI-S)	6